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THE RETENTION AND ATTRACTION OF SUPERIOR MEN

E. L. THORNDIKE

Teachers College, Columbia University

This article reports measures of the extent to which each of the forty-eight states retains the superior men born in it as compared with men in general born in it, and measures of the extent to which it attracts superior men born outside it as compared with men in general born outside it. We call the former measure for any state its SRQ (Superior Retention Quotient), and the latter its SAQ (Superior Attraction Quotient).

The affiliations, that is, correlations, of SRQ and SAQ with other pertinent facts about the forty-eight states are then measured, and the causes of the retention and attraction of superior men are investigated.

Superior men as used in this article includes women and refers to the persons listed on 2000 of the 2764 pages of *Who's Who in America* (1938-39 Edition), on 1500 of the 1600 pages of *American Men of Science* (1938 edition), and on all pages of *Leaders in Education* (1932 edition) omitting persons listed in *Who's Who in America* or in *American Men of Science*. I have recorded the state of birth and the state of residence for all native-born superior men (except for the few who reported themselves as residing in two states). I compute for each state the percentage ($P_{sup.}$) which the number of superior men born in it and still residing in it is of the number born in it. From data in the U. S. Census of 1930 I compute the percentage (P_{all}) which the number of all persons born in it and still residing in it is of the number of all persons born in it. The first of these two percentages of retention divided by the second gives the SRQ of the state, a measure of the ability of the state to retain the superior men born in it in comparison with its ability to retain the general run of persons born in it. The superior men are in all states much more mobile than the general run, so that SRQ never is as high as 1.00.[1] It varies widely, from .60 for California down to .16 for South Dakota.

The Superior Attraction Quotient is computed for each state by using the number of superior men residing in the state but born in other states and the number of all persons residing in the state but born in other states. For example, for every 10,000 persons residing in Delaware but born in some other state there were 42 (41.54 to be exact) in our lists of superior men,

[1]The percentage of *Who's Who* persons retained in the state of birth is 34, and the percentage for *American Men of Science* is only 19; whereas the percentage for persons in general is 74.

whereas for every 10,000 persons residing in Arkansas but born in some other state there were only 3 (3.25 to be exact) in our list of superior men.

Table I presents these two measures for each state, and gives the ranking of the states for their retention and attraction of superior men in comparison with the native-born in general. Table I also presents the ranking

TABLE I

THE RETENTION AND THE ATTRACTION OF SUPERIOR MEN IN COMPARISON WITH THE RETENTION AND ATTRACTION OF MEN IN GENERAL

Column I relates that Alabama, Arizona, Arkansas, etc., retained respectively 52 hundredths, 38 hundredths, 37 hundredths, etc., as many of their "superior" persons as they retained of men and women in general.

Column II relates that they attracted respectively, from persons born in other states, 8 ten-thousandths, 10 ten-thousandths, 3 ten-thousandths, etc., as many "superior" persons as they attracted of men and women in general.

Column III gives the relative positions or ranks of the states for retention of superior men (SRQ).

Column IV gives their ranks for attraction of superior men (SAQ).

Column V gives their ranks for SBQ, the production (i.e. birth) of superior men compared with the production of men in general.

	Scores		Ranks		Rank in
	Retention SRQ	Attraction SAQ	Retention	Attraction	Production SBQ
	I	II	III	IV	V
Alabama	.52	8	7	30	42
Arizona	.38	10	21	22	33
Arkansas	.37	3	22, 23	48	44
California	.60	10	1	26	22
Colorado	.27	9	35	28	5
Connecticut	.35	33	25	3	3
Delaware	.47	42	10	1	29
Florida	.48	7	9	41	43
Georgia	.55	11	4	20	46
Idaho	.24	6	39	43	4
Illinois	.36	13	24	17	27
Indiana	.27	8	36	34, 35	21
Iowa	.23—	10	43, 44	25	13
Kansas	.23+	6	41	45	14
Kentucky	.37	8	22, 23	31	39
Louisiana	.57	10	2	25	48
Maine	.26	29	37	5	10
Maryland	.44	29	15, 16	6	28
Massachusetts	.45	32	12	4	2
Michigan	.33	8	31	33	25
Minnesota	.33	13	30	16	20
Mississippi	.40	4	17, 18	46	45
Missouri	.33	8	29	32	31
Montana	.22	7	45	37	17

TABLE I (*continued*)

	Scores		Ranks		Rank in Production
	Retention SRQ	Attraction SAQ	Retention	Attraction	SBQ
	I	II	III	IV	V
Nebraska	.23	8	43, 44	34, 35	16
Nevada	.44	15	15, 16	14	18
New Hampshire	.24	22	39	7	6
New Jersey	.30	14	33	15	32
New Mexico	.17	11	46	21	47
New York	55	34	3	2	26
North Carolina	.49	15	8	13	38
North Dakota	.16	7	47	37	12
Ohio	.34—	9	28	27	19
Oklahoma	.34+	4	27	47	34
Oregon	.31	7	32	38	24
Pennsylvania	.40	18	19	8	30
Rhode Island	.39	17	20	10	11
South Carolina	.45	12	13	19	37
South Dakota	.16	7	48	39	7
Tennessee	.40	10	17, 18	24	41
Texas	.52	7	6	42	40
Utah	.55	12	5	18	1
Vermont	.24	17	39	9	9
Virginia	.46	16	11	11	35
Washington	.23	7	42	40	15
West Virginia	.45	6	14	44	36
Wisconsin	.29	15	34	12	23
Wyoming	.35	9	26	29	8

of the states for the production (that is, birth) of superior men in comparison with their production of persons in general. This ranking for what we may call the "Superior Birth Quotient" is quoted from the writer's "Origin of Superior Men," (*Scientific Monthly*, May, 1943).

The measures of Table I deserve consideration by those who are responsible for the welfare and progress of a state. They should consider its need for superior ability and how to supply it without damaging the welfare of the nation as a whole. Consider, for example, the facts for North Carolina and South Carolina. These states are closely alike in the production and retention of superior men (with South Carolina a bit ahead), but in attracting such persons from other states South Carolina falls behind.[2] Kansas leads Nebraska in giving birth to superior men, and by a hair's breadth in retaining

[2]Data not presented in this article show that it falls still further behind in the attraction of superior men born outside the United States.

them, but attracts only three-fourths as many (6 and 8 respectively per 10,000 men in general attracted). Michigan is above Delaware in production, but far below it in retention, and enormously below it in attraction.[3] Rhode Island is below Massachusetts in production and retention, and far below it in attraction.

All this may be as it should be. South Carolina, Kansas, Michigan and Rhode Island may have all the superior men they need. It may be better for the nation, and for these states as well, that North Carolina, Nebraska, Delaware and Massachusetts should have all that they do have, even if the others have fewer than they need. But at least the facts should be known.

Further consideration of the facts of Table 1 may be left to the reader's interests. I turn to more general facts, and first to the correlations of production with retention and attraction.

The correlation with retention is negative (—.44) with attraction, positive (.32), giving a difference of 76 points. I have checked these results by using the important data on production reported in 1928 by Visher.[4] Visher's main inquiry included 24,000 persons sketched in *Who's Who in America* (edition of 1922-1923), 9000 non-starred persons in the 1921 edition of *American Men of Science*, the 1000 starred scientists in 1903, 796 additional starred scientists of 1909, 1921, and 1927, and 250 members of the National Academy of Science. His rankings differ notably from my rankings for a much later period, but the correlations with retention (SRQ) and attraction (SAQ) are much the same (—.27 and +.49 respectively); and the difference of 76 points is just the same.

Visher presents also birth data for 732 labor leaders taken from a report of Sorokin and for 1604 women in *Who's Who in America*. I have made a composite ranking, giving equal weight to each of these and to Visher's main ranking. The correlations of this composite production ranking with retention and attraction are —.48 and .34 respectively, with a difference of 82 points.

There is a slight positive relation (.21) between retention and attraction. It is the net result of a great variety among the forty-eight states. Some, such as Delaware, Maryland, Massachusetts, New York, North Carolina and Virginia, keep many and attract many (relative to their retention and attraction of persons in general); but some, such as Florida and Texas, keep

[3]These facts for Delaware and Michian are largely due to the fact that the Dupont Company brought a large number of superior men of science into Delaware whereas the automobile industry brought relatively few into Michigan.

[4]S. S. Visher, *Geography of American Notables*, Indiana University Studies, vol. xx, No. 79.

many and attract few; some such as Maine, New Hampshire, and Vermont keep few but attract many.

Consider now the following nine measures of a state:

Latitude.

Longitude.

P, Personal qualities of the residents of the State, a composite index of ten measures relating to their intelligence, morality, and care for the home. *P* is described in detail on p. 239 f. of *American Cities and States: Variation and Correlation*, etc., in vol. xxxix of the *Annals of the New York Academy of Sciences*, 1939, by E. L. Thorndike.

P_{wh}, Personal qualities of the white residents of the state, a composite index of five scores (for the frequency of home ownership, the frequency of farm ownership, the infrequency of illiteracy, and the infrequency of deaths from homicide and syphilis) among white residents only.

I, per capita income, an index derived from nine measures as described on p. 238 f. of *American Cities and States*.

I_{wh}, is an index computed from these three items: (1) The estimated number of whites in the state reporting net incomes of $5000 or over, obtained by subtracting 1 from the total number of such persons for each 10,000 colored. This number is then divided by the white population. (2) The estimated number of income tax returns by whites, obtained by subtracting 1 from the total number of returns for each 1,000 colored. This number is then divided by the white population. (3) A composite of (a) the median value of the homes owned by native-born whites, (b) the median value of the homes owned by foreign-born whites, (c) the median rental of the homes rented by native-born whites, and (d) the median rental of the homes rented by foreign-born whites. Native-born and foreign-born are given relative weights of 2 and 1; owned and rented homes are given equal weights.

Items (1), (2), and (3) were given approximate weights of (8), (13), and (6) in deriving the final composite index I_{wh}. That I_{wh} is a fairly reliable index of the per capita income of the white residents of a state is evidenced by the fact that in the thirty states which had negligible non-white populations the correlation between I_{wh} and I is .94.

Percentage of white residents in 1930.

Mf., Manufacturingness, a measure obtained as follows: The value added to raw materials by manufacturing done in the state is divided by the value of farm property in the state. This gives quotients running from about .01 in North and South Dakota to over 5.00 for Massachusetts and Rhode Island, with the median at .38. I score them from —8 to +8 in an approximate geometrical progression in which:

.010	to	.015	is scored —8	.41	to	.60	is scored +1
.016	to	0.23	is scored —7	.61	to	.90	is scored +2
.024	to	.035	is scored —6	.91	to	1.35	is scored +3
.036	to	.053	is scored —5	1.36	to	2.03	is scored +4
.054	to	.079	is scored —4	2.04	to	3.05	is scored +5
.08	to	.11	is scored —3	3.06	to	4.58	is scored +6
.12	to	.17	is scored —2	4.59	to	6.89	is scored +7
.18	to	.26	is scored —1	6.90	to	10.34	is scored +8
.27	to	.40	is scored —0				

Cityness in 1900 is a score computed from:

4 × (the percentage of the population in cities of 100,000 or over in 1900)
+ 2 × (the percentage of the population in cities of 25,000 to 99,999)
+ 1 × (the percentage of the population in cities of 8,000 to 24,999).

The score runs from 0 for some states to 242 for New York, but is turned into values from —4 to +8 by the rating of 0 to 6 as —4, of 7 to 14 as —3, of 15 to 24 as —2, of 25 to 34 as —1, of 35 to 44 as 0, of 45 to 64 as +1, of 65 to 84 as +2, of 85 to 104 as +3, of 105 to 129 as +4, of 130 to 159 as +5, of 160 to 189 as +6, of 190 to 225 as +7, and of 225 to 260 as +8.

The correlations of interest are presented in Table II.

TABLE II

The relations of P, P_{wh}, I, I_{wh}, etc. to the retention of superior men in comparison with the retention of persons in general (SRQ), and to the attraction of superior men in comparison with the attraction of persons in general (SAQ). Each entry is the correlation (Pearson coefficient) of the measure named above it with the measure named at the left of it.

	SRQ	SAQ*
P (personal qualities of residents)	—.60	.15
P_{wh} (personal qualities of white residents)	—.43	.58
I (income per capita)	.07	.50
I_{wh} (income per capita of white residents)	.34	.60½
Percentage of white residents	—.48	.14½
Mf. (predominance of manufacturing over agriculture)	.38	.58
Latitude North	—.56	.29
Longitude East	.09	.52
Cityness in 1900	.20	.50

*The measures of SAQ used in correlating are the quotients of Table I as adjusted by the following approximate geometrical scale:

3.0	to	3.47	= —7	13.2	to	15.2	= +2
3.48	to	4.02	= —6	15.3	to	17.6	= +3
4.03	to	4.66	= —5	17.7	to	20.5	= +4
4.67	to	5.41	= —4	20.6	to	23.8	= +5
5.42	to	6.28	= —3	23.9	to	27.6	= +6
6.29	to	8.45	= —2	27.7	to	32.0	= +7
8.46	to	9.80	= —1	32.1	to	37.1	= +8
9.81	to	11.37	= 0	37.2	to	43.1	= +9
11.38	to	13.1	= +1				

Reading across each row in Table II, we observe evidence of the influ-

ence of each of these features of the life of a state. For example, *P*, which I have shown elsewhere to be the main determiner of the production of superior persons ($r = .87$), is strongly antagonistic to retention ($r = -.60$) and favors attraction only a little ($r = .15$). The states whose residents own their homes, graduate from high school, spend public money on libraries rather than roads and sewers, do not commit murders, or contract syphilis, and otherwise score high in *P*, produce far more than their share of superior men, but they do not as a rule keep them. They send them forth to supply the nation. We may hope that they have enough left for their needs.

A high status in P_{wh} is strongly antagonistic to retention ($r = -.43$), and favors attraction strongly ($r = .58$).

High per capita income favors both retention and attraction. Both facts are accentuated in the case of the income of whites.

A high percentage of white residents is strongly antagonistic to retention and favors attraction slightly.

Manufacturingness (the value added to raw materials by manufacturing divided by the value of farm property) shows substantial correlations with retention and attraction (.38 and .58 respectively). If we had a more accurate indicator of the relative importance of manufacturing and farming in the life of a state, these correlations would presumably be higher.

Northness is strongly antagonistic to retention (—.56), and favors attraction moderately (+.29). Eastness favors retention slightly (.09) and attraction strongly (.52). Cityness favors both.

Reading down each column of Table II, we get information concerning the causes of the differences among the states. The SRQ column informs us that *low* status in *P* and P_{wh}, high status in I_{wh} and Manufacturingness, and Southness are indicators of the causes of the retention of superior men.

The SAQ column informs us that P_{wh}, *I*, I_{wh}, *Mf.*, Longitude *East*, and Cityness are indicators of the causes of the attraction of superior men. 33½ per cent ($.58^2$) of the variation among the states in SAQ is attributable to what is measured by P_{wh}, 25 per cent ($.50^2$) to what is measured by *I*, 36½ per cent ($.605^2$) to what is measured by I_{wh}, 33½ per cent ($.58^2$) to what is measured by *Mf.*, 27 per cent ($.52^2$) to what is measured by longitude East, and 25 per cent to what is measured by Cityness in 1900. But each of these scores may measure in part some of the same forces measured by one or more of the others. In fact, they do (except for *P* and *Mf.*), as is shown by their being positively correlated as shown in Table III.

From the facts of Table II and Table III, it is possible to compute the contribution of what is measured by any one score *and not by any specified other score on our list*, and also to compute the contribution of what is

TABLE III
INTERCORRELATIONS OF P, P_{wh}, ETC.

	P	P_{wh}	Percentage of white residents	$Mf.$	Lat. N.	Long. E.	Cityness
I	.50	.358	.506	.49	.50		.697
I_{wh}	.107	.102	.12	.634		.255	
P		.856	.887	—.04	.82		
P_{wh}			.77	.097	.52	.11	.291
$Mf.$					.13	.52	.692

common to any two of the scores on our list. For example, we find the following for the causation of differences among the states in attraction (SAQ):

28 per cent is determined by what is measured by P_{wh} and not by $Mf.$
28 per cent is determined by what is measured by $Mf.$ and not by P_{wh}.
5½ per cent is determined by what is common to P_{wh} and $Mf.$
61½ per cent is determined by P_{wh}, and $Mf.$ combined.

Using P_{wh} and I_{wh} as causes of the variation in SAQ, we find that:

27½ per cent is determined by what is measured by P_{wh} and not by I_{wh}.
30½ per cent is determined by what is measured by I_{wh} and not by P_{wh}.
5¾ per cent is determined by what is common to P_{wh} and I_{wh}.
63¾ per cent is determined by P_{wh} and I_{wh} combined.

We can extend this procedure to the forces measured by three or more of the items of Table II. Using P_{wh}, I_{wh}, and Longitude East as determiners of SAQ, we have the following:

24.6 per cent is determined by what is measured by P_{wh} and not by I_{wh} or Long. E.
21.6 per cent is determined by what is measured by I_{wh} and not by P_{wh} or Long. E.
12.0 per cent is determined by what is measured by Long. E. and not by P_{wh} or I_{wh}.
4.6 per cent is determined by what is common to P_{wh} and I_{wh}.
3.8 per cent is determined by what is common to P_{wh} and Long. E.
8.2 per cent is determined by what is common to I_{wh} and Long. E.
74.8 per cent is determined by P_{wh}, I_{wh} and Long. East combined.

The addition of $Mf.$ to the combination raises the percentage determined to 75.7. If the attractions of Florida and California for the superior to rest in when aged could be eliminated from the data, the combinations of P_{wh}, I_{wh}, $Mf.$ and Long. East would probably be even more potent.

The determination of retention (SRQ) by P reversed, $Mf.$ and I_{wh} is as follows:

.392 by what is measured by P reversed and not by $Mf.$ or I_{wh}.
.026 by what is measured by $Mf.$ and not by P reversed or I_{wh}.
.092 by what is measured by I_{wh} and not by P reversed or $Mf.$
.008 by what is common to P reversed and $Mf.$
—.040 by what is common to P reversed and I_{wh}.[5]
.54 by P reversed, $Mf.$, and I_{wh} combined.

The addition of Southness, Eastness or Cityness to the combination will not raise it appreciably.

It is encouraging to those who hope to make the social sciences causal and quantitative to find that three-fourths of the production, half of the retention, and three-fourths of the attraction, of superior men of a specified sort in comparison with ordinary men can be accounted for by measurable forces, so far as concerns differences among the states of the United States. These fractions would probably be even higher if we could use less artificial and arbitrary local divisions than the forty-eight states.

[5]The —.040 means that there is something in P reversed which lowers I_{wh} and so prevents I_{wh} from exerting full force on retention.

OUTSIDERS

A study of the personality patterns of children least acceptable to their age mates.

MARY L. NORTHWAY
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Every school room is a social group and the relationships among the members form patterns similar to those in other groups. There are the leaders, the cliques, the reciprocal companionships and the isolated members. Because of the potential dangers isolated individuals hold for a democratic society and because of the effects isolation has on personality development, we have been concerned with studies of the children who are least acceptable to their age mates. These studies have not consisted merely of scientific observations, but have included co-operative attempts with the school to devise ways and means by which personalities in their still plastic stages may be guided towards better social integration.

THE SCHOOL SETTING

One aspect of these studies has been the intensive investigation of children who at the beginning of the study were in a small public school, in grades 5 and 6. In these we have followed the same children for a period of two years; there were eighty children in all. At the time the study began the school was a newly opened institution in a middle class district of a suburb of Toronto. The buildings and equipment were functionally adequate for the needs of the growing child and attained the highest standards advocated by modern education. The principal and staff were enlightened in child development and actively interested in the children's individual development and social relationships.

THE TOOLS WE USED

Working closely with the teachers our eyes were focussed on the lively, human unpredictable group the teachers see, rather than on the theoretical statistical child of the text books. Our records were designed to catch the human, whole child as much as possible. Over the two year period these records consisted of:

1. The school's basic records, age, family, health status, school progress, special difficulties, interviews with parents.
2. Intelligence tests, group and individual.
3. Reports on psychologists' interviews with the children.
4. Time sample studies of class room participation.

5. Observational records of the child on the playing field and in special situations, *e.g.*, music groups, public speaking, school entertainments, team games.
6. Lists of the officers and members of clubs within the school.
7. Reports on children's participation in selected discussion groups.
8. Children's compositions on such topics as "the kind of person I like."
9. An analysis of the school year book (written by the children themselves).
10. Sociometric testing within the classrooms.

Analysis of the Data

From the two year study the results are being analyzed in three ways: (1) to show the sociometric pattern of the groups and the changes in it; (2) to discover personality characteristics related to various degrees of social acceptability (these will form the basis of a later paper in this journal); (3) to study the personality patterns of the children who were least acceptable to their companions.

Sociometric Testing as a Screening Test

Sociometric testing was used as our device for discovering the least acceptable children. The form of test (12) used consisted of questions asking the child for his choice of associates in four actual school situations. For each situation he had to report his first three choices (3). The choices of each child received were scored, 5, 3 and 2 for a first, second and third, respectively. These were then placed on a "target diagram" the children in the highest quartile in the center, those in the lowest in the outer circle (10). Individual choices were drawn with lines connecting one child with another. During the two years the test was given in October and May of each year.

In previous studies (1, 2, 4, 6) it had been determined that all children whom psychiatrists had designated as "recessive" were found in the lowest quartile of acceptability, but that all the children in the lowest quartile were not recessive. The sociometric test can therefore be used as a screening test for selecting recessives. As children of other characteristics are also screened out our study was directed to a thorough study of children who were "outsiders." This finding led us to our investigation of personality patterns of children within this division.

Other studies, such as Loeb's (6), had investigated factors which might be related to degree of social acceptability. She found insignificant relationships between acceptability and age, mental age, and I.Q., and only a slight relationship with success in certain school subjects; the one significant rela-

tionship discovered was that between discrepancy of rank in ability and achievement scores. Those children whose rank in achievement in school subjects was above their rank in mental age were found to have significantly higher acceptability scores. Therefore in commencing our study we had two clues about characteristics of children in the lowest quartile: (1) that recessive children were likely to be found (2) that the children's ability was not highly directed to achievement in school work.

The Outsiders

The children whose scores were in the lowest quartile (in our target diagrams the outer circle) were called "outsiders." In each classroom there were ten such children. From observing and interviewing these children and discussing them with the teachers the most apparent fact was the different personalities and forms of behaviour shown. Some were noisy and difficult to manage in class, others quiet and unassuming; some had high I.Q.'s, others low; some were attractive looking, others wan and thin; some did good school work, others poor or erratic; some were given no choices by their companions, others scored as much as fourteen; some came from economically good homes, others from poor; some participated to the minimum amount in class discussion, others received high class participation scores. The only factor common to all was that they were all among the least acceptable fourth of the group.

In compiling our information, however, it seemed that several children in the group showed similar characteristics. Although these were contradicted by other children the similarities present led us towards sub-classification within the group. The working basis in setting up these sub-categories was in terms of the therapeutic measures the staff and ourselves were suggesting as means of guiding the child to better socialization. In all, three distinct personality patterns were found: (1) Recessive children, (2) Socially uninterested children, and (3) Socially ineffective children.

The Recessive Children

There were six children among the eighty children in the two classrooms of the school* of whom two may be considered severe cases and four mild. They are listless, lack vitality, usually under par physically, either below normal in intelligence, or ineffective in their use of the ability they have;

*"Studies of Recessive Children" by Griffin, Laycock & Line, 1938, on file Canadian National Committee for Mental Hygiene estimate 5 - 6% of children in the school population will be found to be recessive.

careless in appearance, care of possessions, work habits; lack interest in people, activity or events of the outside world. They seem to exist rather than live, and throughout careful interviews with these children, observation of them or discussion with those familiar with them, no inner drive or outgoing interest could be located.

This recessivism varies from severe to mild. The child whose energy seems to be sufficient merely to keep him alive and carry him through the day without drive or thrill exemplifies the severe form. The child who does not participate actively in events but at least takes a slight interest in what is going on and what happens to him is of a milder form. (See casess I and II).

Socially Uninterested Children

These children superficially appear to be similar to the truly recessive children. They are not liked by the others nor do they appear to make any effort in either formal class activities or social affairs of the school. They are often quiet and retiring. However, on closer examination it is found that they are much better developed in their care of person and possessions and that they have interests. Those interests are personal rather than social. A child's energy may be directed towards art, music, science, hobbies, reading or to affairs of the home. Some of these children are merely quiet with and uninterested in other children; some are shy and uncomfortable with them; some are bored and critical of them and some rather objectively and impersonally interested in observing what other children do without in any way attempting to participate with them. These children accept requirements of classroom procedure with passivity and rarely try to rebel or initiate any changes. Nine children in the school group were considered to be of this type. (See cases III and IV).

Socially Ineffective Children

Children of this third group differ completely in their superficial behaviour from the former group; they are often noisy, rebellious, delinquent in classroom affairs, boastful and arrogant. They are a nuisance to the teacher and the life of the classroom. They appear to be diametrically opposite from recessive children. However, this is not true, for they have in common the lack of acceptance by classmates and these manifested forms of behaviour seem to have arisen as rather ineffective, naïve attempts to overcome the basic social insecurity and isolation from group life which they experience. They have vitality and are keenly interested in social affairs, but because of failure in the establishment of social relations, they make

effortful, conspicuous, and often foolish and futile attempts to be recognized and accepted by the social group. There were five of these children in the group. (See cases V and VI).

Extension of the Studies

These three personality patterns which were categorized from the intensive school study were substantiated by analyses in other schools and camps. Twenty-eight teachers from as many schools using their own classrooms as subjects wrote case histories of the children who were in the outer quartile of acceptability. Most of these cases, it was found, could be categorized into the three types. However, the teachers' descriptions added and re-emphasized certain points; the recessive children they mentioned over and over again as "dirty", "untidy", "no care of his books", "sloppy work book", "uncombed hair", "nice clothes but always untidy." These children may be said to be lacking in basic personal organization. They also stated these children had always been peculiar children as long as the school had known them.

Reviewing the cases of lowest acceptability from our earlier camp studies (11) similar patterns were found to be present. (See cases IV and VI.)

The characteristics vary of course from case to case, but the real types seem clear cut in their basic symptomology. However, the real value of the differentiation lies in terms of the treatment which may be used with each group.

Treatment

In these studies we have attempted to discover in what ways the facilities and the personnel of the school itself may be used constructively to help the child in the establishment of better social relationships and personal integration.

With the truly *recessive* child, at least as he is found in the upper grades, the school has made little progress. Superficially the child has been helped to take better care of himself and his possessions and mere guidance on his school work has been given. Attempts to use small groups or individual children as socializing agents have not been very successful, nor have attempts to develop interests had more than temporary influence. These children seem to present serious pre-psychotic conditions and perhaps the school's best contribution is to be able to locate them and to refer them to qualified specialists. They show many of the schizoid tendencies and in many cases should not be called recessive at all, for they have never developed a personality from which to recede. As no energy or interests can be

found directed to outward activities or social relations it must be that such energy as they have becomes increasingly ingrown and is therefore symptomatic of schizoid development.

The other groups, however, respond favorably to treatment within the school itself. We have found that the *socially uninterested* child may fairly readily be helped towards the establishment of social relationships. His very interest regardless of what it may be forms the basis for re-direction. The child who is interested in music and can be given opportunity to use inconspicuously this interest in some form of social participation for the benefit of the group soon begins to discover satisfaction arising from it. The factor of *inconspicuous* participation is important. We have found it most unwise to "put the child, as it were, socially on the spot," on the basis of his talent. To have the musical child play for the whole school or the artistic child give a talk to the Home and School Club is unwise. If the child fails he becomes the laughing stock of the group, and because of his lack of social security, failure in performance will be unduly tragic to him. If he succeeds he becomes established in the role of a musician, "the guy who's always playing the violin" rather than as a person. Therefore to bring the interest inconspicuously into social participation (see case IV) avoids these dangers and gives the child the means of finding himself acting with the group rather than for the group. Insightful teachers, given a little understanding of these general principles, handle such children well and develop ingenious methods for dealing with the particular case. With older children the technique of using one or two of the youngsters to whom the child is favourably inclined (as shown by his choices) as intermediary to help this youngster into group participation can be effective. Explaining the child and the situation to those already accepted children gives them an opportunity to advance their socialization towards concern for and help of others.

These socially uninterested children present a hopeful prognostic picture if treatment of the kind suggested is provided. However, they present so many characteristics of the recessive child that if care is not given them they may become recessive in the true sense. Their very interests may lead them further from social contacts or, if it should break down through force of circumstances, or become stagnate through no freshening by social impetus, psychotic symptoms may quickly increase.

The *socially ineffective children* also need help in the establishment of social relations and legitimate forms of social responsibility in the school offers a way to increase their sense of status. Confidence of the teacher and participation in school sports and games are valuable. It seems wise to

give as little attention as possible to the child's undesirable form of behaviour either through reprimand or punishment or obvious concern. This social attention is exactly what the child is seeking and any activities which receive it will continue. However, in cases where certain superficial forms of behaviour such as boasting of his family's position and possessions is one of the objectionable factors, a teacher who has won his confidence may point out to him the effect this is having on other children and suggest forms of behaviour which they would find more pleasant. Insight into himself is sometimes gained by group discussion about what characteristics we like and dislike in people, but such treatment is secondary to establishing in the child a sense of acceptance and status.

If nothing is done for these children beyond traditional punishment for the more severe misdemeanors it is doubtful that they will become schizoid, but they may become delinquents, rebels, misanthropes or paranoids or at best unhappy people who are usually a social nuisance.

Etiology

In all these children, failure in the establishment of adequate social relationships is the common-factor. The causes of this can be understood only in terms of our knowledge of personality development in the family, play group, school and gang. With both the socially uninterested and the inefficient child, at some point social learning has been inadequate to meet social situations and the child has taken refuge in withdrawing to non-social interests or by hitting blindly at the problem without finding a satisfactory solution. In order to understand any one case it is necessary to know the particular factors in the background of that child's social development.

The recessive child, however, seems to show more than a failure in social development. Preliminary studies with babies and young infants* leads us to suppose there may be innate temperamental differences in children in terms of their vitality and readiness for contact with the world and their adaptability to change. Some infants are enclosed within themselves, resistant to changes in routine, unresponsive to people. If this temperamental factor does exist it may be the predisposing factor in later recessivism. However, added to this, the picture the teachers give of lack of basic personality organization suggests that lack of family consistency and affection, and failure to guide the child in the establishment of both adequate habit

*Investigations now being conducted by Dr. Eleanor Long with children under two years at the Infants' Home, Toronto.

patterns and self organization in the pre-school years may be important factors.

Mental Hygiene Point of View Adopted in Our School Studies

In using the social acceptability scale we have frequently found the assumption being made by teachers and others, that the attainment of a high social acceptability score was considered the desirable position for a child to hold. From our observations of children the assumption that increased social acceptability and optimal personality development are directly related seems unwarranted. It is true that those children with zero or very low scores present problems, but beyond that we have no evidence for believing high acceptance is better than acceptance by a few friends and acquaintances. As long as our society is such that it requires its artists, its thinkers, its quietly effective people as well as its leaders, its salesmen, its flamboyant figures it would seem necessary we help a child form the kind of adjustment which is most adequate for him. The youngster with his few loyal friends, a socialized point of view, and ability to play his part in a group may be as adequate and happy a person as the very highly acceptable child who is the center of the group. Because we live in a culture evaluating business and therefore the arts of salesmanship and influence, we have set extraordinary values on extravert qualities; with children perhaps the most unfortunate thing we do is to insist that to be successful they must drive towards winning friends and influencing people. The teachers who can use the qualities of the reserved artistic child, the quietly effective thinker, for the increased benefit of the group as a whole is thereby establishing a truly democratic society within which each person contributes according to his unique qualities and profits in terms of his unique experience.

Interpretation

The sciences of man are becoming increasingly aware that man cannot be understood except in his society, and that society cannot be understood except in terms of man. Personality patterns reflect the social development of a child but they also are important in determining what his place in society shall be. The outsiders are dangerous to themselves in terms of their future development as potential psychotics or misfits, and to society in terms of their drive for social domination to compensate for their lack of social assimilation. Diagnosis through use of sociometric testing at the school level is useful, but guidance cannot be carried out solely by trained clinicians but must come through the efforts of enlightened parents and teachers who have normal contacts with the child in his everyday world. Because, however, at the upper public school levels personality patterns are

already fairly stabilized, it is important that increasing attention be given to the emergence of these characteristics in the pre-school child and that effective means of guiding his social development at that level be ascertained.*

CASES

Recessive Children

I. *Doreen*

Doreen is a tall, scrawny girl of 13. Through the two years of our study she has always been among the least acceptable of the children. Last spring a serious lung operation was performed from which she is still convalescing. Her I.Q. rating has gone up from 70 to 79 and her social acceptability from 0 to 2 casual choices.

Teacher's Report

Background. Doreen has been a special case for study for some years. She attended another school for several years and presented the same set of problems to the staff there. However, the situation a few years ago was not as acute as now. Her brilliant sister, Anna, was two or three years behind her in that school but now Anna has caught up to her and is really far ahead in all class activities. Last year our doctor told the parents that Doreen had a chronic lung and bronchial tube infection that could be remedied. The remedy was a serious operation. The parents, especially the father, would not consent. In June 1942 the case was at a standstill. However, during the summer the operation was performed and Doreen returned to school about the middle of September. We also had suggested in June that Doreen attend a private school or our own Central School so that she would not be embarrassed by comparisons with Anna. Our suggestion was not accepted.

As we see Doreen. She is still not well but I believe she is better than last year. We all feel sorry for her and we try to find opportunities to encourage her. She is not interested in School and merely goes through the routine.

Social Relations. None of the girls in the class seems to be genuinely interested in Doreen. The boys think she is dumb and let it go at that. A Roman Catholic girl from another school is Doreen's only friend. This girl frequently comes to our school after 4 o'clock, but she is now becoming interested in other girls and the activities of our school and is paying less attention to Doreen. This is an unfortunate development. Doreen sings in the United Church Choir and goes to Sunday School regularly. She also attends the C.G.I.T. Her leader says that at first she disliked everything the other girls liked; never wanted to be agreeable and would be very critical of others. At election

*Recent studies (to be reported in this journal) indicate that social relationships at the upper pre-school level are fairly stabilized in a group of children attending nursery school.

time Doreen was nominated for treasurer but missed out and protested that the voting was unfair. She eventually gave in but did not seem satisfied. The leader thinks that lately Doreen has been more sociable. Her parents *say* that she likes C.G.I.T. and seldom misses. Incidentally, her sister Anna is the president of the group.

Treatment. The most tangible angle of Doreen's problem seems to be that of health. She is still convalescing from her operation and this year all of her activities have been modified accordingly. It is too soon to expect to see evidence of the group's acceptance of Doreen. We are encouraging her by giving her things to do within her ability. Her music test indicates that she has some native ability (more than Anna) and we are coaxing her along in this activity. She *says* she wants to be a musician in later life. We wish we could convince the parents to put Doreen in another school. Another attempt to persuade them is under way now. If Doreen is not set on the road to proper adjustment this year, we hate to think of what will happen.

Psychologist's Report

C.A. — 13 — 11	Social Acceptability (3rd test)
M.A. — 10 — 8	Score — 5 **Rank** — 40/40
I.Q. — 79	Classroom participation rank — 8

Doreen seems very worried and uncertain during the Binet test. She kept asking about the test—why it was being given, to whom it was being given and why she in particular had been chosen to try the test.

She has a very low I.Q. and it is hardly likely that she will attain academic success. It does not seem advisable for her to continue very long in the regular schools.

One of her major difficulties is her sister. Anna is more than a year her junior, quite attractive, bright and most popular individual in her class. Doreen is very sensitive about this situation and tried to steer away from any questions about Anna.

Doreen asks a great many questions about her own work in class and very often gives wrong answers. Her hand seems to be raised all the time. Doreen seems quite disinterested and unexcited about school. She did, however, brighten up a little when she talked about a girl friend who does not go to this school, and when she talked about a party she had gone to a few days before.

Doreen has a few interests—she sings in a choir and likes to go to a show. But she is completely overshadowed by her sister. Doreen is not pretty and her face is covered with sores and blemishes. She was ill in the hospital last summer which may account for the lethargic way she seems to drag herself around.

Child's Own Report

The kind of person I like best is one who is polite and very nice, and who is interesting, the person who has a great sense of humour and

is lots of fun and who is a good sport and who has a sense of modesty and quick understanding and even temper.

II. *Teddy*

Teddy is eleven and is in grade 7. He is a big fat boy with glasses. He has an I.Q. of 128 but his interests in school or the children are nil. His work is erratic, sometimes showing considerable brilliance, at others being sloppy, unfinished, stupid and untidy. The school has tried to spot interests and get Teddy into things. But efforts seem to be futile and he is becoming more withdrawn and vague.

Socially Uninterested Children

III. *Cedric*

Cedric is a boy with few social contacts but a real interest in art.

Psychologist's Report

		Grade 6. School.	
C.A.	11.1	Social Acceptability score	5
M.A.	15.4	Social Acceptability rank	35/38
I.Q.	138	Class Participation score	12
		Class Participation rank	15/38

Data obtained through an Intelligence testing interview.

General Impression. Cedric is a rather shy and quiet boy who talked very little either about the test or himself. Although he is low in social confidence, he is very certain about his work and gave his responses to the test in a very confident and dogmatic way. He has a slight stammer which was not apparent till after about 15 minutes of conversation. He rarely looked directly at me, preferring to look beyond me even when answering questions.

Family. Ced (He prefers this to Cedric) is the only child of rather old parents (according to Miss S.). He is asked to help out in his dad's men's store on occasion but doesn't like selling very much. His parents take him to the show every Friday night and he rarely goes with any other boys. His parents, however, are not trying to keep him entirely to themselves as he belongs to the Boy Scouts.

Social Relationships and Interests. Although he has some pals at the Cubs, Cedric doesn't seem to care much for them and sees them only at meetings, etc. There is only one boy from his class in the same pack; they aren't friends really. Cedric is not a member of any gang at school or in the neighborhood but says he likes Jack F. best and goes around with him the most. Since Jack is the most popular boy in the class it does not seem likely that this is a real friendship.

Cedric is not at all fond of reading and rarely goes to the library. He spends some time at home with his mechano set but his real interest is in drawing and most of his time is thus taken up. At school also, art is his favorite subject, and he also likes social studies and gym, although he does not seem to be a very sturdy lad.

Test Performance. Cedric made hardly any comments about the

test and seemed to want to concentrate on getting the answers right rather than talk about himself. He likes the test whenever he thought he had answered correctly, which occurred quite often, but when we reached the more difficult items, his stammer became worse. Cedric was always very definite about his answers and he always felt they were right. When he guessed for the meaning of some of the vocabulary words he was disappointed that they were not right, even though he was not sure of their meaning. When I said "that's fine" or commented on how well he was doing, he perked up noticeably and smiled but if I forgot to do this, or if he thought his answer was not correct he looked ashamed. Cedric gave his responses very quickly and since it was difficult to get him to talk much, the test was very short.

Summary and Suggestions. Cedric is an only child with but one real interest and apparently no real friends. He is not a friendly sort of lad, and although his participation score is rather high, it seems likely that he speaks out in order to show others that he is not so dull as perhaps they think. He is a bright boy but it may be that his parents are trying to push him ahead faster than he can take it, and the pressure seems to be too great emotionally. His interest in art could be extended so as to include other children perhaps, but if he constantly expects recognition from them and from the teacher something else must also be done to help him.

Boy's Own Report

The kind of person I like is one who is always agreeable, who is loyal and can be trusted. He should have consideration, a good loser and some humour.

IV. *Gwen*

Gwen was sixteen when she was first sent to camp. She did not want to come. Although she spoke little she told us that as soon as camp was over she was going into a convent. She cabined with a group of four interested campers who enjoyed all activities thoroughly and worried because they could not get Gwen to take part. She went off sketching by herself at every opportunity. Sports she said bored her and the table conversation she found "dumb". No pressure was put on her to join in camp activities. However, her counselor with subtle insight into the situation one day asked her if she would be good enough to help the girls who were putting on a play by using her talent for drawing to make the backdrops. For several days Gwen worked in a room just off the stage making her designs. When the play was produced its success was increased by the original backdrops Gwen had made. She gained her sense of achievement through the group's success and experienced for the first time the satisfaction that arises out of being part of a common enterprise.

This episode marked a turning point in Gwen's camp life. From then on she took part in all activities involving creative and artistic ac-

tivity and gradually assumed real responsibility for organizing these. The camp staff never could decide just how successful the summer had been for when Gwen left her ambition to go into a convent had changed into an ambition to go on the stage!

At the beginning of the season her acceptability score was zero, by the end she was accepted by her own group of cabin mates and received good status among the campers as a whole.

Socially Ineffective Children

V. *Ken*

Ken is a bright looking little boy of 12. His acceptability has dropped during the last two years. Although he was liked eighteen months ago, very few children choose him at present. He is always talking and making a noise and emphasizing how superior he is to the other children.

Teacher's Report—Ken

Background. Ken has a brother and sister both older than he is. His mother is French Canadian. His father is in business and is away from home a great deal of the time. There have been several occasions in the past two years when I needed the help of the parents but I have not succeeded in getting active support. Ken's academic position was not good enough last June to promote him into Grade 7. We promised him the opportunity of trying another set of examinations at the beginning of September. He worked diligently during September and we promoted him into Grade 7. He immediately slipped back into last year's careless habits and we have had to prod him continually to keep him up with Grade 7.

Ken as we see him. Almost everyone—pupils and teachers—agree that Ken talks too much. However, he is a likable sort of lad, with a ready smile but is inclined to be bold and saucy. He gets into a number of scraps but faces the consequences and pays the price. At the present time he, with two other boys, is in wrong with the police for climbing up on a roof of a factory and jumping off into a snowdrift. He ran away when he first saw the police but decided that they "wouldn't do much to him for just a little thing like that", and went back to the officer. The school interceded for him and he promised to play fair with us and try to stay out of trouble. However, before this situation cleared away, he was caught stealing bags of candies in the stores. He admits that he stole the candies and says it is not the first time. He seemed to be sorry that he didn't play fairly with us and shed a few tears about it. We're inclined to think that he is so plastic that he takes the form of whatever group he happens to be with. So far we are making very little progress with Ken.

Social Relations. Ken had been in Grade 7 only a week or so when the acceptability test was taken so that I believe it did not show his true position. I think it will rank higher in the next test with this group. (It did not.) His name was recently mentioned by members

VI.

of the Hi-Y Club as a nominee for membership. This group, which is made up of boys of Grade 8, turned him down unanimously. They said he was silly and not reliable.

Treatment. On numerous occasions we have talked to Ken about being a nuisance in class and on the field. He is always ready to discuss the question. He talks easily and freely admits that he is in the wrong. He says he forgets and the first thing he knows he has done something "stupid."

Psychologist's Report

Kenneth Eric — Grade 7.
C.A. 12.5 M.A. 12.2 I.Q. 98 Social acceptability
Father in business.

Ken announced his name was Kenneth E. —. His father works in the —— business. On being asked if he ever went down to the factory he said, very firmly, "My father doesn't work in a factory — he works in an office."

He asked for reassurance continually and at one point very politely requested to know "Why am I being asked these questions?"

He likes going skating but has had a recent appendix operation (which he referred to frequently) which keeps him from sports at present.

There are no special events Ken is looking forward to, although, "we might have a Valentine party, but we have so many parties here."

Ken has a bicycle which he used to ride with the boys to the airports—"a club of us went but the club is broken up now. There were rules and discipline and the boy whose house it was at was president. They played games and ate. It broke up because we broke things at my house. We broke the chandelier and it cost $10.00."

Ken doesn't like art but likes the rest of school all right. (We had noticed Ken being very objectionable in an art class).

Child's Own Report

The type of person I like is: Clean in appearance, pleasant to talk to and has a good sense of humour, but there are many other important details. When you are gone away from him he will be loyal to you. Then when other boys have done something good compliment them—not to be a bad sport about it. Say you are playing at something—a fort for instance—will work pleasantly to build a fort of his own. If he has the quality of minding his own business he will not interfere. But if you are a good sport tell him to build a fort nearby and we could have great fun. If a person has all those things he's a good enough fellow for anybody.

VI. *Matilda*

Matilda was twelve when she came to camp. She lived with a "Victorian" mother and grandmother while father was off on business.

In acceptability she scored zero. She was dirty, careless and physically awkward. She had no sense of her own or other people's property. She borrowed her cabin mates' clothes indiscriminately and when they were dirty rolled them up in the corner.

Matilda made a great effort to attain attention. She talked incessantly and every few days picked out a new favorite whom she would follow around for as long as possible.

The camp at that time followed the policy of playing up individual talent as a means of developing group recognition. Matilda soon announced her talent was elocution. So she was allowed to perform at the camp concert. The result was unfortunate. The more pathetic Matilda's recitation was the louder became the laughter. Later she took an interest in nature study and was encouraged by the nature study leader to prepare five minute talks on the life of the chipmunk and give these to the camp assembly. This not only harmed Matilda still more, but damaged the entire nature programme.

Matilda used a technique common to children desiring social approval. She gave gifts. If her gifts had been of the kind twelve year olds like she might have had some success. Unfortunately her father was in a business that carried old fashioned embroideries. Samples of these were bestowed on all of Matilda's admired campers. The effect was disastrous.

We recommended a programme planned to teach Matilda the basic routines of washing and dressing and care of possessions. Also the public appearances were to be abolished. However, these suggestions were not put into effect and the child left camp completely as ineffective socially as she had been before this opportunity.

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RELATIONSHIPS BETWEEN SOCIAL SUCCESS, FAMILY SIZE, SOCIO-ECONOMIC HOME BACKGROUND, AND INTELLIGENCE AMONG SCHOOL CHILDREN IN GRADES III TO V

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This study is concerned with the relationships between social success and three other factors: family-size, socio-economic home background, and intelligence. The purpose is to arrive at an evaluation of these factors as determining influences in social acceptance.

The subjects for this study were pupils in the third, fourth, and fifth grades of three schools in Denton, Texas. One of the schools is the Demonstration School associated with the North Texas State Teachers College; the other two are public elementary schools.

Social success was measured by pupil choices—some of the choosing situations were of a true sociometric nature in the sense that the results of the choices were used in actual classroom situations; others were obtained for research purposes only.

All the choosing situations which were used in the three grades studied have been described in previous publications; in the interests of saving space, these will not be repeated here in detail. However, a brief statement of these situations will be given.

On the third grade level in the three schools the children choose others with whom they would like to have their pictures taken, whom they would prefer to work with on a committee for a social event, have as a partner for an Easter party, and as a partner for a trip to Fort Worth to visit the packing house. In addition to the above situations, the children also designated the ones to whom they expected to give Christmas presents, voted for a class librarian, and make sketches of their best friends in an art class. The number of Valentines each child received was also determined. Some of the above choosing situations were held in all three schools, and some were held in one school only. In two schools there were six choosing situations throughout the school year and in the other one there were five.

On the fourth grade level the children chose companions for working on committees, listed names of those to whom they would like to give Christmas presents, wrote the names of three best friends who were to be rated on personal traits, selected companions for working on a classroom project, listed names of all children who would be selected to remain in the room if all others had to leave, voted for a king and queen for a Valentine party, elected officers for a class club, voted on the "best citizen" in the room, and wrote

the names of all their best friends and the best leaders in the room during the school year. The number of Valentines received by each one was also determined. As in the third grade, not all these choosing situations were held in all three schools. In two of the schools there were seven opportunities for choice, and in the other one, eight.

On the fifth grade level the children in the three schools wrote a letter to their teachers describing the personal characteristics of two of their best friends (as an assignment in language class). They wrote the names of the children they would most like to take to a picture show if they had the money. They elected class officers several times and they wrote the names of their best friends during the school year as well as the names of the best leaders for the year. Also the number of Valentines received by each one was determined. Except for the election of class officers, all the above choosing situations were held in all three schools. There were five in two of the schools and seven in the other one.

In most of these choosing situations over the three year period, no limit was placed on the number of choices which each child could make. All choosing situations were conducted by the classroom teachers.

General social acceptance, as used in this study, is a measurement which is composed of scores derived from all of the different kinds of situations listed above. Thus it is a composite of friendship attraction and various kinds of leadership ability. In order to state this general social acceptance in numerical terms, the following system of scoring was used: first choice—5 points, second—4 points, third—3 points, fourth—2 points, fifth—1 point, and all other choices—1 point. Thus, if a child in a particular chooosing situation received one first-place choice, two second-place choices, and one third-place choice, he would have a score of five, plus eight, plus three, or a total of sixteen. After the raw scores were obtained in this manner, they were converted into per cents. At the end of the school year, all of these per cent scores for the various choosing situations for each child were added, and these totals were then divided by the number of choosing situations held in a particular grade that year. Consequently, the general social acceptance scores consisted of the average per cent scores received on all the choosing situations throughout the school year. By converting the raw data into per cents, the three schools were placed on a comparable basis regardless of the number of children in a grade or the number of choosing situations held.

The IQs used in this study are, for most of the cases, averages obtained from two or more years' testing with group tests. In 32 per cent of the cases the averages are based on five consecutive years of testing. In the first and second grades the California Mental Maturity Test was used. In the third

and fourth grades the Kuhlmann-Anderson Test was given, and in the fifth grade the testing was done with the Otis Self-Administering Tests of Mental Ability. The fact that several tests were used, and that the final IQ assigned to each child was in most instances the result of more than one test, should add to the validity of the measurements of degree of brightness.

The socio-economic level of the home backgrounds was measured with "The Minnesota Home Status Index" developed by Alice M. Leahy. This scale is divided into six parts as follows: Children's Facilities, Economic Status, Cultural Status, Sociality, Occupational Status, and Educational Status. A total score is obtained. Only these total scores were used in this study. This scale was administered to the children in school rather than through home visits or conferences with the parents. The school principal and the classroom teacher in each school, as well as the writer, were present to help the children interpret the questions and decide upon the best answers. The fact that the principles and the teachers were quite well acquainted with the home situations of nearly all the children was of great aid for this purpose. Also, the writer had been in a good many of the homes. In scoring the papers, if any answer was found to be contrary to fact, that answer was changed. There were very few of these, and most of such instances involved the classification of the father's occupation. This proved to be especially difficult for the children to decide, and the discrepancies on this point between the judgment of the children and that of the adults administering the scale were no doubt due to unfamiliarity of the children with this kind of question rather than any attempt to distort facts. Probably the best evidence that the children did answer the questions honestly is found in the distribution of the total scores. The averages for the three grades were very close to the norm established for the scale, or a little below. The norm is 0. In one grade the average score was +.23, with about one-half the group above the standardized norm. In another one the average was +.10 with about 40 per cent above the scale norm. In the third group the average was —.34, with only about 15 per cent above the established norm.

Attention will now be turned to the findings of the study. Consideration will be given first to the relationship between family size and social success. The facts bearing on this relationship, in terms of quartile comparisons, are given in Table I. Comparisons are given for the total number of siblings of the child studied, as well as the number of siblings within five years of the age of the child studied.

A study of the data of Table I shows a strong tendency for the more popular children to come from the smaller family units. This is true on each grade level. Considering first the total number of siblings, Table I shows

TABLE I

RELATION BETWEEN SOCIAL STATUS QUARTILES AND FAMILY SIZE IN THE THIRD, FOURTH, AND FIFTH GRADES IN THREE SCHOOLS IN DENTON, TEXAS

	Third Grade 72 Families			Fourth Grade 85 Families			Fifth Grade 102 Families		
Social Status Quartiles*	Ave. Total Sibs.	Ave. Within 5 yrs.	Only Children	Ave. Total Sibs.	Ave. Within 5 yrs.	Only Children	Ave. Total Sibs.	Ave. Within 5 yrs.	Only Children
4	1.44	.55	7	1.83	.82	6	2.26	.92	5
3	2.11	.94	5	2.80	1.07	3	2.14	1.20	5
2	1.89	.88	4	2.20	1.20	2	2.30	1.17	4
1	1.89	1.39	2	2.70	1.40	2	3.15	1.29	2

*Each quartile contained 20 or 22 cases in different grades.

that in the third grade the most popular children (the fourth quartile) had the smaller average number of brothers and sisters. The difference between the highest and lowest groups is .45. In the fourth and fifth grades the evidence bearing on the greater social success of children coming from the smaller family units is even stronger since the differences between the averages of the upper and lower fourths is greater. In the fourth grade this difference is .87 and in the fifth grade it is .89. This means that in these last two grades the most popular children had, on an average, almost one less sibling in their families than did the least popular children.

The data for total siblings in the two intermediate quartiles do not fall into any very consistent pattern, but on the whole they support the foregoing emphasis on the relationship between popularity and smaller family size.

This relationship is further substantiated by the data on the number of siblings within five years of the age of the child studied. When the upper and lower fourths in popularity on each grade level are compared, it is evident that the least popular children had more brothers and sisters near their own age with whom to associate in growing up than did the most popular ones. The extent to which the children in the lowest fourth came from larger family units than those in the highest fourth is shown by the differences between these two groups in family-size averages. In the three grades, these differences ran: third grade .84, fourth grade. 58, and fifth grade .37.

As in the case of the total number of siblings, the data for the two intermediate quartiles for children within five years of the age of the child studied do not fall into any very consistent pattern with the two extreme groups, but at least the evidence for these two middle groups does not contradict the emphasis on the superior social position of the small family.

The figures on "only" children are very consistent in showing the greater social success of the "only" child. Survey of Table I also shows that on

each grade level the number of "only" children drops with almost complete regularity from the highest to the lowest social status quartiles.

The advantageous social position of the "only" child is better established from a consideration of the representation of this family size in the various quartiles in proportion to its representation in the total population of families. On the third grade level there were 72 families of which 18 were "only" child families. This is twenty-five per cent. Consequently, it could be expected that approximately twenty-five per cent of the family-size representation in each social acceptance quartile would consist of "only" child families. The highest popularity group, however, was composed of thirty-nine per cent "only" children, whereas the lowest popularity group was composed of only eleven per cent "only" children. The two intermediate groups fall into the same pattern of relationships.

On the fourth grade level there was a total of 85 families of which thirteen, or 15 per cent, were "only" child families. The highest popularity group consisted of 28.6 per cent "only" children, which is almost twice as large a percentage as would be expected from the representation of this family size in the total population of families. On the other hand, the lowest group in social acceptance was composed of only nine per cent "only" children, which is six per cent (15 — 9) less than normal expectancy.

The same emphasis is given by data on the fifth grade level. Of the 102 families on this level, sixteen, or 15.6 per cent, were "only" child families. The highest fourth in social acceptance consisted of 19 per cent "only" children, which is 3.4 per cent above normal expectancy, whereas the lowest fourth in popularity consisted of only 8 per cent "only" children which is 7.6 per cent (15.6 — 8) below normal expectancy.

Before concluding this discussion on the relation between family size and social success, it is necessary to consider the data from another standpoint. Reference is made to the need of considering the proportional representation of all the different family sizes over the period of three years in the four social acceptance quartiles in relation to their proportional representation in the total population of families, when there is no overlapping of cases due to counting the same child in more than one grade. The first step in this procedure was to determine the number of different families involved in the three-year data. This was 150. The next step was to group these families into different sizes as follows: only child, one or two siblings, three or four siblings, and over five siblings.[1] Then the number of cases in

[1]There were a few families which included step-children and half-brothers and half-sisters, but it was decided not to consider these in the family-size data because it was

each of these family-size groupings was determined for each social status quartile during the three-year period, but each case was counted only once even though he or she was in the same quartile all three years. The only over-lapping of cases at all was due to the fact that a few children shifted from one quartile to another during the three-year period. In these instances, the child's family size was counted in each quartile. There were not enough of these to make a significant difference in the data. Of course, during the three-year period there was a large population turn-over. Many children were included in the study only one year, due to families moving in and out of Denton. In fact, of the 150 different families included in the three-year study, only 38 were present all three years.

The final step in evaluating family size in relation to popularity was to determine the percentage of the total population of families which was included in each of the family-size groupings mentioned above. These were then compared with the percentage representations in each of the social status quartiles. This data and the corresponding comparisons are given in Table II.

TABLE II

RELATION BETWEEN THE REPRESENTATION OF VARIOUS FAMILY SIZES IN THE TOTAL POPULATION OF FAMILIES AND THEIR REPRESENTATION IN THE SOCIAL STATUS QUARTILES 150 FAMILIES

Family Size		Per cent of Each Family Size in the Social Status Quartiles			
No. of Siblings	Per cent of Population	1st	2nd	3rd	4th
0	17.4	8.9	10.6	19.6	18
1-2	49.3	50.0	53.0	45.7	48.7
3-4	22.6	28.5	30.0	21.7	18
5 or more	10.6	12.5	6.4	13	15.4
Totals	99.9	99.9	100.	100.	100.1

Table II shows that the "only" child families have a slightly higher representation than normal expectancy in the two upper social status quartiles, and are definitely below normal expectancy in the two lower groups, especially the lowest one. The family-size in which the child studied has one or two siblings (or a total of three children in the family) has a representation in each of the four quartiles which is very close to normal expectancy. The family size involving three or four siblings is represented a little below normal frequency in the two upper quartiles, and particularly so in the highest one. In the two lowest quartiles this family size has a representation which is

not known how long they had been in the families, and, furthermore, most of them were far removed from the age level of the child studied. There is no reason to think that their inclusion in the data would have made any material difference at any point.

considerably higher than its proportion of the total population of families would warrant. Finally, the very large family-size, involving six or more children, has a good representation in the two upper quartiles, especially the highest one, but also has a little more than normal expectancy in the lowest popularity group.

A general summary of the foregoing statements reaffirms the point previously made in respect to the superior social acceptance of the only child. The medium size family (with a total of three children) just holds its own; the above average size family (with a total of four or five children) is in the poorest social position; the very large family (six or more children) is in a very good social position with the exception of its representation in the lowest quartile.

Correlation coefficients (Pearson Product-Moment Method) were obtained between total number of siblings and the social status scores in the three grade levels studied. In the third, fourth and fifth grades these coefficients ran respectively: third grade $+.07 \pm .08$ (71 cases), fourth grade $-.07 \pm .07$ (84 cases), fifth grade $-.11 \pm .07$ (103 cases). These coefficients show that when total groups are considered there is practically no relationship between family size and the social status scores.

Before giving a more complete evaluation of the relationship between family size and social acceptance it will be appropriate to consider the data on socio-economic home background obtained from the Alice Leahy scale. It will be recalled that this scale was administered on only the fifth grade level. The distribution of social status scores and of family sizes in relation to various levels of home background is given in Table III.

TABLE III

RELATION OF SOCIO-ECONOMIC HOME BACKGROUND TO SOCIAL STATUS, AND FAMILY SIZE

Quartiles on Basis of Home Background*	Average Social Status	Average Number of Siblings	Only Children
4	4.61	2.20	2
3	2.35	2.00	3
2	1.99	2.42	5
1	2.03	3.90	2

*Each quartile consists of 22 cases.

The first point which is apparent from a study of Table III is that the most popular children, as a group, came from homes which were decidedly superior to those of the other children in cultural, social and economic factors. The next highest popularity group (third quartile), although considerably

below the highest group, is noticeably superior to the two groups below average. There is very little difference in home background scores between the two lowest groups in social acceptance.

The data on family size show very little difference in number of siblings between the two highest groups in home background, but these two groups are characterized by definitely smaller families than the below average groups. This is especially true of the lowest quartile which has an average of almost four siblings. The difference in number of siblings between the highest and lowest groups amounts to 1.7. It can be observed from Table III that the 12 "only" children upon whom data were available in the fifth grade are about evenly distributed among the quartiles, but there are two more in the below average groups than in those above average.

On the whole, the data of Table III show a tendency for the most popular children to come from the "better class" of homes and from the smaller family units. This tendency is borne out by correlation coefficients. An r of $+.39 \pm .06$ ($N = 92$) was obtained between the social status scores and the home background scores, and an r of $-.29 \pm .06$ ($N = 91$) was found between total number of siblings and the home background scores. It is evident, however, from these correlations, as well as from the quartile distributions, that there must be many exceptions to the above mentioned trend. Some of these exceptions will be dealt with subsequently.

In the meantime, the data on intelligence quotients will be considered in its relation to social acceptance. This is given in Table IV.

TABLE IV

RELATIONSHIP BETWEEN SOCIAL STATUS QUARTILES AND INTELLIGENCE IN THE THIRD, FOURTH, AND FIFTH GRADES OF THREE DENTON SCHOOLS

Social Status Quartiles	3rd Grade Average	4th Grade Average	5th Grade Average
4	111	114	111
3	104	109	103
2	102	103	99
1	97	101	93

Inspection of Table IV reveals that the IQ averages fall consistently with the social status quartiles. There is not a marked difference between the two middle groups, but the upper fourth in all three grades is definitely superior to the lowest fourth. The differences between the two extreme groups in the third, fourth, and fifth grades run respectively: 14, 13, 18. These differences are large enough to leave no doubt about the intellectual superiority of the most popular children, as a group, over the least popular. This conclusion is further substantiated by the fact that on the first and

second grade levels, the children in this follow-up study showed similar average differences between the most and least popular children, being in these two grades 16 and 17 IQ points.

Correlation coefficients obtained between the social status scores and IQ's in the three grade levels under consideration gave the following results: third, $+.34 \pm .09$ ($N = 48$); fourth, $+.31 \pm .06$ ($N = 81$); fifth, $+.45 \pm .05$ ($N = 100$). Although these correlations leave no doubt about there being a positive relationship between popularity and degree of brightness in the groups studied, they nevertheless certainly are not high enough to permit of accurate predictions from one measurement to the other. Obviously, there must be many exceptions to the generally positive trend shown by the coefficients.

Attention will now be turned to some of the marked exceptions to the general group trends.

Over the three year period covered by this study, there were six children in the highest popularity quartiles who had IQ's below 100. Two were below 90. Such cases show the possibility of a relatively dull child attaining a high degree of social success. Of these six children, measurements on home background with the Leahy scale were available for five of them. Only one of these was up to the average for the highest group in popularity. Three of them had scores which were lower than the average for the lowest group in popularity. In other words, over a period of three years in a total population of 150 different children, three of them (all boys) were able to attain a high degree of social acceptance even though they were far below other very popular children both in IQ's and socio-economic home background. It may, therefore, be assumed that in other similar public school populations approximately two out of a hundred children will attain a high degree of social acceptance in spite of the fact that they are markedly inferior in both intelligence and home background to other socially successful children.

The reasons why a few children can achieve a high degree of social success in spite of serious handicaps in intelligence and home background are undoubtedly to be found in the structure of their personalities. These children have attained the right proportions of aggressiveness, daring, sympathetic responses, and friendliness—traits which have been found in this follow-up study to be very important in winning admiration and in establishing inter-personal relationships (5).

In the teachers' year-by-year written evaluations of the three exceptional children mentioned above, such expressions as the following are most common: "Has lovely personality", "works well in any group", "very good natured", "unusually generous", "is adorable, fair and square", "likes to help on activities or run errands", "everybody likes him". Not all the teachers'

comments were favorable. Most of those which were not had reference to the child's dislike for school work.

The one case showing the most marked deviation from the general group trends of the highly popular children was that of a country boy who came in on the school bus. He had an IQ of 80 and his home was very low in socio-economic level. There were six other children in the family, most of them older boys. In the fifth grade he was next to the top in his total average per cent score for social acceptance. The explanation of this boy's unusual social success lies in his delightful personality. His teachers say he is a "very good" child in the sense that he is very unselfish and genuinely concerned about the welfare of other. He is described as sweet, generous, kind, sympathetic and very sensitive to group wishes, and yet not a sissy or effeminate. His social interest is shown in the fact that he sometimes corrects other children in the interest of a group situation, as the time when he cautioned another boy to stop making a noise during a school program. These corrections are nearly always taken in the spirit in which they are given. He never tattles.

According to one of the teachers who visited in this boy's home, the parents are gracious, sociable, and intensely interested in the best development of their children. No doubt parental influence has been the chief factor accounting for this boy's pleasing personality, but it should also be stated that the school to which he has gone has tried to capitalize upon his assets rather than penalize him for his disabilities. Although, as would be expected from his low IQ, his academic work has been very poor, he has not been forced to suffer the humiliation and general frustration so frequently inflicted upon the dull normal child in the public schools. Who would say that society is not better off when the schools promote wholesome personality development in those children who are seriously below average in intelligence rather than fighting, ridiculing, and humiliating them for years in a futile effort to try to get them to learn material beyond their grasp? Of course, instruction too should be emphasized because a part of their "wholesome personality development" is the learning of all they can within their limits.

Space does not permit detailed discussions of many of the exceptional cases, but a few more will be mentioned briefly. One is that of a girl who has been in the upper fourth in popularity in her grade for five years and who comes from a family of 9 children, including herself. Her home background score on the Leahy scale is —.60, but this is not particularly low for the group she was in. Her average IQ for the five years' testing is 101. Written teacher evaluations from the first grade on up have emphasized such points as: "self-reliant and cooperative", "dramatic ability", "very good

ability before the group", "pretty appearance and attractive smile", "has a smile for everybody and is well dressed and attractive", "always works well with others", "she thinks of other children", "never says anything to offend others", "she tries to make other children happy and will sometimes do things to help others even at some sacrifice to herself". This latter point was illustrated on the fourth grade level in her reaction to membership in a little clique formed by some other girls. She stuck with them for a few days until it became apparent to her that the exclusive nature of this group was hurting some other girls; whereupon she announced that she didn't think it was right to snub the others, and she told the teacher about it. This broke up the clique, and the teacher rose to the occasion by starting a club for all the girls.[2]

The most marked example of a very bright child from a good socio-economic home background who was very unpopular is that of a girl on the fifth grade level. Her IQ is 126 and her home background score is —.41, which was in the upper third of her particular school group. There are three other children in her family. She was in the lowest fourth on the basis of the sociometric scores in the fifth grade, which is the only year she was in the groups being studied. Her teacher described her as "socially retiring and distant", "not interested in others", "no initiative", "poor social response", "very little ability to do or say anything before a group", "others pay no attention to her". Apparently as a compensation for her social inferiority this girl reads a lot and also eats to excess.[3] Her over-eating has sometimes produced unfavorable comment from other children. She is considerably over-weight. Obviously, this girl simply lacks social skills.

Five other children with high IQ's were in the lowest popularity group during the one or more years they were in the groups studied, and nearly all of them were characterized by shyness, timidity and inability to do things before a group. One exception was that of a girl who was not shy but who had some unfavorable behavior traits, apparently due to the fact that her parents were dead and she was being reared by an older sister who was unable to successfully play the role of a substitute mother.

A final evaluation of the data of this study leads to an emphasis on

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[2]Since writing the last three paragraphs, the writer has discovered a comparable finding in respect to the kind of behavior which seems to count most in social success in a study by H. H. Jennings: *Leadership and Isolation: A Study of Personality in Inter-Personal Relations;* see Chapter VIII on Behavior Characteristics of Under-chosen, Average Citizens, and Over-chosen, and especially p. 154.

[3]H. H. Jennings reports a like observation in the case of an isolate: see *Leadership and Isolation,* p. 177.

the need of studying individuals to determine personality maladjustments and needs, rather than depending upon such factors as family size, intelligence, or socio-economic home background as delineating any certain kind of personality structure—good or bad. The same may be said for other factors not included in this study such as birth order, academic achievement, delinquency areas, or any other factors external to the dynamic influences working within each individual.

For a long time students of delinquency were almost exclusively concerned with the general external factors associated with delinquency, such as poverty, low IQ, broken homes, bad housing, etc. More recently, students of misconduct have become much more concerned with what all these conditions mean to the individual—how they promote frustration of his basic wishes. Of course, the studies of factors related to both delinquency and to social success are important, and more are needed to verify and refine present findings; but parents, teachers, and club leaders must be concerned with the reasons for the success or failure of individuals rather than with group trends.

This study has shown that, on the whole, the children with the highest degree of social acceptance come from the smaller family units, from homes representing relatively higher social-economic levels, and are more intelligent. But this information could easily become misleading to anyone who took it too seriously, because in working with children he would soon discover that some children who come from large families, or very poor ones, or were low in intelligence, would be very popular. He would also discover that some children who were high in one or more of these respects would be very unpopular. Then he would have to search for the motivations of the behavior of individuals. In doing so he would have to try to find out about the *quality* of inter-personal relationships in the home rather than paying much attention to the *quantity* of such relationships. If he found an "only" child who was spoiled, egotistical, attention-demanding or what not, he would not assume that the simple fact of his being an "only" child had in itself any explanatory value, but he would rather look into the kind of relationships the child had had with his parents and other children, knowing that the same kinds of good and bad personality traits are found in children from all family sizes.

Likewise, the worker with children should be impressed with the fact that outstanding social skills may be found in children in any public school population from all socio-economic levels and from all degrees of brightness (with the possible exception of the feebleminded). Although those who come from poor homes and have low intelligence are certainly handicapped and generally do not attain a high degree of social recognition, the fact remains that some do, and this fact is a credit to the democratic operation of the

American public school system. Furthermore, some who have the best home and intellectual advantages attain only a meager amount of group acceptance. Apparently the most important factor in social success is the kind of total personality which has attained the necessary social skills for winning satisfying responses from others. It is in this area of personality traits that research is most needed to determine not only the kind of traits needed, but also the kinds of learning situations and experiences necessary to develop them.

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A CONSTANT FRAME OF REFERENCE FOR SOCIOMETRIC RESEARCH

PART II. EXPERIMENT AND INFERENCE[1]

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INTRODUCTION

In Part I of the present paper the writer discussed certain major difficulties involved in the interpretation and comparison of sociometric data. It was pointed out that no adequate methods had been developed for comparing results of sociometric tests for groups differing in size. As a solution the writer proposed the development of a constant frame of reference through application of the deviation-from-chance-expectancy concept. It was shown that by comparing the results obtained in a sociometric test to those secured in a mathematically analogous chance situation (*e.g.*, drawing names from a hat) it is possible not only to identify statistically significant data but also to interpret results obtained from mathematically diverse sociometric situations. Procedures and formulas for obviating computational difficulties presented by the technique were developed and the application of the method was illustrated.

In Part II, which is to follow, the writer demonstrates some of the types of experimental analysis made possible by the refinements in sociometric technique described in Part I. The experiments to be reported are significant not in terms of yielding conclusive results, but rather in terms of defining problems, providing specific approaches for their solution, revealing pitfalls, eliminating blind alleys, illustrating the general scope and character of results that may be obtained, suggesting hypotheses, and delineating areas for subsequent intensive investigation. Specifically, an attempt was made in these experiments to pave the way for the longitudinal study of sociometric status, structure, and development in groups of varying size.

SECTION 1

THE EXPERIMENTAL SETTING[2]

Subjects and Groups. A sociometric analysis was made of the entire

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[1]Part I subtitled "Theory and Technique" was published in the preceding number of SOCIOMETRY, Vol. VI, No. 4, November, 1943.

[2]Grateful acknowledgment is extended to Dr. Willard C. Olson, Director of the University Elementary School at the University of Michigan and to the teaching staff for their cooperation in administering the sociometric tests.

population of the laboratory elementary school at the University of Michigan. This population included children from the nursery to the sixth grade level, but inasmuch as the four upper grades had been combined into two classes, there were but six separate social groups in all: Nursery, Kindergarten, Grade I, Grade II, Grade III-IV, and Grade V-VI. The groups ranged in size from fourteen to thirty-three. The demands of the war had created greater family mobility in the university community so that withdrawals and new entrants were more frequent than they had been in previous years. In general, classes became smaller over the period during which the study was in progress. The specific constitution of the groups tested is given in Table V. Column I gives the age range at the beginning of the experiment. (The turnover in pupil personnel was not sufficient to require specification of age distributions at subsequent periods). The columns which follow give dates, size of group, and the distribution and ratio of sexes for each sociometric test administered. The last column indicates the number of *permanent* subjects in each group—that is, the number of subjects who were present for all sociometric tests.

With regard to intelligence and achievement, the subjects unquestionably represented a highly-selected group. The average IQ's (Kuhlmann- and Stanford-Binet)[3] for each of the six classes ranged from 110 to 130 and average scores on achievement tests[4] were, on the whole, well above national norms.

Selection and Formulation of Criteria. Experience with preliminary studies showed that great care is necessary in the selection of sociometric criteria and the formulation of questions embodying these criteria. Unless the activity is familiar to the members of the group, unless all members are equally free to participate in the activity, unless preference is not influenced by extraneous environmental factors, and unless the nature of the choice is clearly conveyed by the question, the results of the sociometric analysis may easily be invalidated. For example, such a question as "With whom would you like to go to the movies?" was found to give biased results, since children tended to select those who lived nearest in their own community. It is of course impossible to anticipate all such sources of bias, or even to eliminate them once they are known. Indeed, it may not even be desirable to attempt to eliminate *in toto* the effects of such a factor as living in proximity, for this condition constitutes a genuine fostering influence in social growth.

[3] *The Kuhlmann Binet-Simon Test.* Baltimore, Maryland: Warwick and York, Inc., 1922. *The Revised Stanford-Binet Scales.* Boston: Houghton Mifflin Company, 1937.

[4] *Gates Primary Reading Test.* New York: Bureau of Publications, Teachers College, Columbia University, 1926. *Stanford Achievement Test.* Yonkers-on-Hudson, New York.

TABLE V

CONSTITUTION OF GROUPS AT TIME OF EACH SOCIOMETRIC TEST

Group	Age Range in Months at First Testing Period	Fall Sociometric Test						Spring Sociometric Test						Number Permanent Cases
		Date	Size of Group	Number Boys	Per Cent Boys	Number Girls	Per Cent Girls	Date	Size of Group	Number Boys	Per Cent Boys	Number Girls	Per Cent Girls	
Nursery	33-53	10-41	18	9	50	9	50	5-42	16	8	50	8	50	14
Kindergarten	55-66	10-41	25	14	56	11	44	5-42	21	9	43	12	57	20
Grade I	64-79	10-41	26	13	50	13	50	3-42	22	12	55	10	45	21
Grade II	79-106	10-41	18	10	56	8	44	3-42	14	8	57	6	43	14
Grade III-IV	87-121	10-41	33	13	39	20	61	3-42	29	12	41	17	59	29
Grade V-VI	115-146	10-41	31	23	74	8	26	3-42	31	22	71	9	29	29
Total			151	82	54	69	46		133	71	53	62	47	127

However, it is important to avoid ambiguous or "heavily loaded" questions which may influence results in an undetermined but perhaps highly marked fashion.

To provide a common basis for comparison, it was necessary to utilize the same criterion in all six classes. Since the groups varied widely among themselves in age and interest of subjects, it was extremely difficult to find activities or situations which were reasonably common for children in all six grades. For several days the classes were observed carefully in their customary pursuits and a list of possible criteria compiled. This list was checked for each group and items eliminated when necessary until three general types of situation remained as commonly observed at all school levels. These three were taken as criteria for a sociometric questionnaire with questions formulated as follows:

1. With what children would you like to work best?
2. With what children would you like to play best?
3. What children would you like to have sit near you?

It is evident that though these questions may have referred to situations found among all age levels in the school, it is hardly likely that children in successive grade groups differentiated between activities to the same degree. Since there was no way to eliminate differences in interpretation or discrimination, an attempt to estimate the degree of variation was made by means of a correlational analysis with respect to choices received on the basis of the several criteria taken separately. The results of this analysis are presented in a succeeding section.

It will be noted that the questions are all phrased positively; that is, the children were not asked to name those whom they would *dislike* as companions. Despite the fact that they might contribute valuable information concerning the degree and character of social rejection, negative questions were avoided because of their possible effect, by calling attention to the less-favored children in each group, of fostering discrimination and thus causing even more severe social maladjustment.

Administration of the Questionnaire. Since children in the lower grades could not read fluently and since a uniform procedure was desirable, the questionnaire was administered at all levels in interview form. In the hope of providing a relatively consistent and high degree of rapport, the home room teacher was asked to do the interviewing herself. The purpose of the experimentation was explained to the teachers at a staff meeting and the following written instructions were presented:

The interview should be conducted in a natural and informal fashion.

Creating an atmosphere of casual routine will minimize the likelihood of children's discussing choice among themselves.

So that chance presence or absence of certain pupils will not affect the results unduly, it is advisable to conduct the interview while most of the children are within view, but of course not within hearing.

Procedure. Say to the child: I WOULD LIKE TO KNOW WHICH CHILDREN IN THIS ROOM WORK AND PLAY BEST TOGETHER. WOULD YOU TELL ME WHICH CHILDREN YOU WOULD LIKE TO BE WITH MOST? CHOOSE ANYONE YOU WISH; YOUR CHOICES WILL NOT BE MENTIONED TO ANYONE ELSE.

Then ask the three questions above, emphasizing the underlined words. Note the child's responses on the record blank. Do *not* ask for three choices specifically. If the child names but one or two, say: IS THERE ANYONE ELSE? If no additional response is made, leave the item blank. Record no more than three responses for each question.

The questions asked have already been presented. The underlined word in each question was the verb describing the criterion. The reason for avoiding insistence on *exactly three* responses was to minimize the possibility of a child's expressing a preference he did not actually feel.

The questionnaire was administered on a school-wide basis during the academic year 1941-42. Two complete sociometric tests were made in each grade—the first test early in the fall of the year, the second during the spring semester. Except for a few absent children, all fall questionnaires were filled out during the third week of October. Absentees were asked to indicate their choices upon the first day of their return to school, which in no instance was longer than two weeks after the main group had been tested. Administrative considerations prevented the giving of spring questionnaires for all classes in the same week. In Grades I through V-VI, the sociometric test was administered during the last week in March; in the two youngest groups, questionnaires were filled out during the last week in May. The procedure for administration was identical in all tests.

Tabulation and Treatment of Data. The child's responses were recorded by the teacher and tabulated by the investigator in accordance with the procedure outlined in Part I. At first, separate totals were computed both for the number of *choices* received by each child and for the number of *different persons* by whom he was chosen. Indices of status, coherence, etc. based on both types of unit were then calculated in order to determine which kind was the more sensitive indicator of sociometric relationship. In view of considerations outlined below, the *choice* was selected as the unit best adapted for fine discrimination in sociometric measurement.

The Selection of Sociometric Units. A comparison of indices based on both types of unit revealed that while negative deviations from the expected value were equally marked in one or the other distribution, extreme devia-

tions *in excess* of chance expectancy were obtained only when the number of *choices* rather than the number of *different persons* choosing was utilized for computing indices. This fact is illustrated by the data in Table VI, which shows the results for the fall sociometric test made in the Grade III-IV group. The number of choices received by each child and the number of different persons by whom these choices were made are given along with the corresponding probabilities of chance occurrence. In interpreting the latter, it should be recalled that the probability cited is the likelihood that *at most* the given score will be obtained by chance. Probabilities greater than .50 indicate events in excess of chance expectancy; indices smaller than .50 denote negative deviations from the expected value.

When the two raw scores made by each child are compared, it will be noted that the number of *different persons* is almost without exception smaller than the number of *choices* and that this difference becomes more pronounced for higher score values. It will be observed further that not only do the corresponding probabilities of chance occurrence differ, but that values in excess of chance expectancy are found far less frequently among person-scores than among choice-scores. When the former do appear, they do not attain levels of statistical significance.[5]

The above situation is typical for each one of the six groups studied. While the distribution of person-scores above the mean value was similar to that which would have been obtained by drawing names out of a hat, the distribution of choice-scores could have come only from the hat of a magician. Yet, paradoxically enough, the correlation between the number of choices received by each child and the number of different children by whom those choices were made was above $+.95 \pm .02$ in three of the six groups and above $+.90 \pm .03$ in all of them.

The phenomenon is explained in terms of social rather than mathematical considerations. In the sociometric situation, each child apparently tends to choose the same persons for more than one criterion. As a result, despite the fact that the two are highly correlated, the number of choices received is usually higher than the number of different persons choosing. Consequently, the variation in choice-score is greater than the variation in person-score. The choice thus becomes the more sensitive indicator of social status and will frequently reveal a statistically significant result left obscure by an index based on the number of different persons choosing.

[5]As seen from the table, the highest person-score obtained by any child was 9 and the probability that a score even higher than 9 would have been obtained merely by chance is 1 — .71 or .29. This value does not approach the arbitrary limit of .02 adopted in the study.

TABLE VI

THE NUMBER OF CHOICES RECEIVED BY CHILD, THE NUMBER OF DIFFERENT PERSONS CHOOSING, AND THE CORRESPONDING PROBABILITIES OF CHANCE OCCURRENCE

(Data Taken from the Fall Sociometric Test for Grade III-IV)

Child	Choices Received Number	Choices Received Probability of Chance Occurrence	Persons Choosing Number	Persons Choosing Probability of Chance Occurrence	Child	Choices Received Number	Choices Received Probability of Chance Occurrence	Persons Choosing Number	Persons Choosing Probability of Chance Occurrence
9	0	.0002	0	.0002	2	8	.4477	4	.0621
10	0	.0002	0	.0002	16	8	.4477	4	.0621
20	0	.0002	0	.0002	4	9	.5903	4	.0621
28	0	.0002	0	.0002	6	9	.5903	5	.1360
12	2	.0053	2	.0067	30	9	.5903	4	.0621
29	3	.0182	1	.0015	13	10	.7112	5	.1360
22	3	.0182	3	.0226	26	10	.7112	6	.2538
1	3	.0182	2	.0067	27	11	.8117	5	.1360
32	4	.0470	2	.0067	33	11	.8117	5	.1360
23	4	.0470	2	.0067	19	11	.8117	5	.1360
7	4	.0470	3	.0226	11	11	.8117	7	.4016
5	5	.1052	2	.0067	8	15	.9826	7	.4016
18	5	.1052	3	.0226	15	15	.9826	8	.5646
24	5	.1052	3	.0226	17	15	.9826	7	.4016
21	6	.1948	2	.0067	14	18	.9983	7	.4016
3	7	.3143	4	.0621	25	21	.9999	9	.7102
31	7	.3143	3	.0226					

Similar considerations were found to apply to the alternative definitions of mutual and inter-class choice. In each instance, a count on the basis of relationship between choices rather than between persons more frequently yielded statistically significant indices.[6]

In view of these facts, throughout all subsequent experimentation sociometric elements were defined in terms of *choices* rather than *persons*. The calculation of indices of status, coherence, cleavage, and isolation for the results of each sociometric test was then carried out in accordance with the procedure illustrated in Part I. The results are presented and analyzed in the succeeding section.

SECTION 2

I. Analysis of Trends

Components of Sociometric Status. It is of interest to determine to what extent the particular activity or situation may have influenced the child's choice of a companion—that is, to what degree children at successive age levels discriminated on the basis of the three criteria in their selection of associates. To phrase the question specifically: in general, were the same children chosen as companions for work, for play, and for seating. To supply an answer to this question, rank correlations (ρ) were computed between raw status scores secured by every child on the basis of each criterion taken separately. The correlations were found to vary between $+.30$ and $+.95$, with all but two of the thirty-six coefficients falling between $+.45$ and $+.90$. The probable errors of these indices ranged from $\pm.015$ to $\pm.13$ with the majority in the neighborhood of $+.08$. The correlations between *play* and *seating* choices were generally lower than those between *work* and *seating*. As may be expected, *play* and *seating* correlated somewhat more highly in the lower grades; *work* and *seating*, at the higher levels. There were no perceptible trends shown in passing from one grade to the next, but within grades correlation coefficients were generally lower for the spring than for the fall.[7]

The data indicate that children who are accepted on the basis of one criterion are likely to be accepted on the basis of other criteria as well, particularly when the activities or situations are simultaneous or overlapping. However, there is room for considerable variation and as the members of a

[6] Indices of coherence based on person-score produced rather curious results; see footnote on page 45.

[7] Since detailed analysis of all coefficients merely substantiated the results cited above and revealed no consistent trends between groups, a complete tabulation of the thirty-six coefficients and their probable errors was not deemed necessary.

group become better acquainted, differentiation on the basis of the activity may become slightly more pronounced. The data leave indeterminate the question of whether older children discriminate more finely on the basis of the criteria than children at lower age levels.

Status Constancy. The degree to which sociometric status remained constant over the five to seven month period between the two sociometric tests in each group is indicated roughly by the magnitude of rank correlation coefficients between the total raw status scores obtained in the fall and spring analyses. The coefficients, along with the number of cases upon which they are based, are presented in Table VII.

It will be noted that the smallest coefficients occur in the groups with

TABLE VII

RANK CORRELATION COEFFICIENTS BETWEEN THE RAW STATUS SCORES OBTAINED BY EACH CHILD IN THE FALL AND SPRING SOCIOMETRIC TESTS

Group	Size of Group	ρ
Nursery	14	$+.27\pm.17$
Kindergarten	20	$+.67\pm.08$
Grade I	21	$+.48\pm.11$
Grade II	14	$+.28\pm.18$
Grade III-IV	29	$+.52\pm.09$
Grade V-VI	29	$+.59\pm.08$

TABLE VIII

PERCENTAGE OF CHILDREN CHOSEN IN EXCESS OF CHANCE EXPECTANCY IN EACH SOCIOMETRIC TEST

Group	Time of Test	Size of Group	Children Chosen in Excess of Chance Expectancy	
			Number	Per Cent
Nursery	Fall	18	2	11
	Spring	16	6	38
Kindergarten	Fall	25	8	32
	Spring	21	9	44
Grade I	Fall	26	8	31
	Spring	22	9	41
Grade II	Fall	18	6	33
	Spring	14	6	44
Grade III-IV	Fall	33	14	42
	Spring	29	12	41
Grade V-VI	Fall	31	13	42
	Spring	31	12	39
Total		284	105	37

the least number of cases. This is not surprising inasmuch as in sociometric situations the number of cases determines the range of scores, and with a wider range it is well known that higher coefficients may be obtained. A further weakness of this correlation technique as a measure of constancy arises from the fact that it is a function of relative status only. If portions of the whole framework shift—for example, if a small group secures higher scores but relative status remains unchanged—the variation is not reflected by the rank correlation coefficient. On the other hand, along with conspicuous changes in status, the coefficient does take into account minor variations in rank which may be purely random. In view of these limitations, it would appear desirable to study the degree of constancy further by methods incorporating the constant frame of reference supplied by the concept of deviation from chance expectancy.

To consider first gross shifts in distribution of status from test to test: Table VIII shows the proportion of children in each group chosen in excess of the expected value. It will be noted that the obtained proportions are consistently smaller than 45 per cent, in other words, less than 40 per cent of the children command half of all available choices in the group. These results are presented graphically in Figure 1. It should be noted that the curve in Figure 1 depicts change both in terms of cross-sectional and longitudinal data. Broken lines show variation from one grade group to the next; solid lines indicate extent of change within the same group after an interval of approximately half a year. The zigzag, "two steps forward, one backward" pattern exhibited in this graph and in others to follow is in all likelihood a product, in part at least, of the dual character of the data. In addition to the trends already cited, the graph reveals a tendency for percentages to increase *within* the grade and to rise gradually in passing from primary to elementary levels. In general, then, the data suggest that in sociometric situations an undue proportion of the choices will be accorded to a minority, and that this proportion will increase slightly as the members of the social structure become better acquainted and more mature.

By utilizing a definition in terms of deviation from chance expectancy, a picture of status constancy independent of the minor, and, in all likelihood, random variations may be obtained. Table IX shows the proportion of children in each group. The graph depicting these data (Figure 2) reveals also an increase in percentage as one passes from lower to higher grade levels. It would appear, then, that sociometric status is maintained more consistently among older children. The rather marked rise occurring between Grade II and Grade III-IV may be explained in part by the fact that the increase which might have occurred from Grade III to Grade IV, were the groups

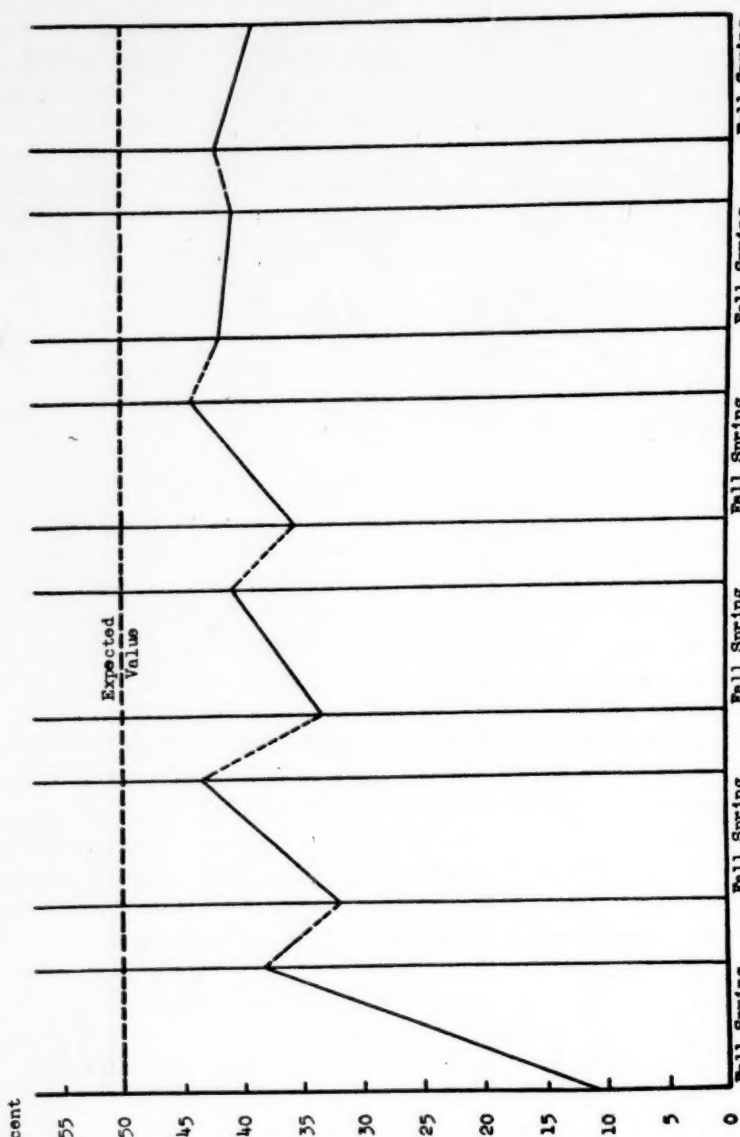


Fig. 1.—Percentage of Children Chosen in Excess of Chance Expectancy in Each Sociometric Test.

TABLE IX

PERCENTAGE OF CHILDREN IN EACH GROUP WHO APPEAR WITHIN THE SAME RING OF THE SOCIOGRAMS FOR BOTH FALL AND SPRING SOCIOMETRIC TESTS

Group	Number of Children Appearing in Both Sociograms	Children Appearing in Same Ring of Both Sociograms	
		Number	Per Cent
Nursery	14	3	21
Kindergarten	20	6	30
Grade I	21	9	43
Grade II	14	5	31
Grade III-IV	29	18	62
Grade V-VI	29	13	45
Total	127	54	42.5

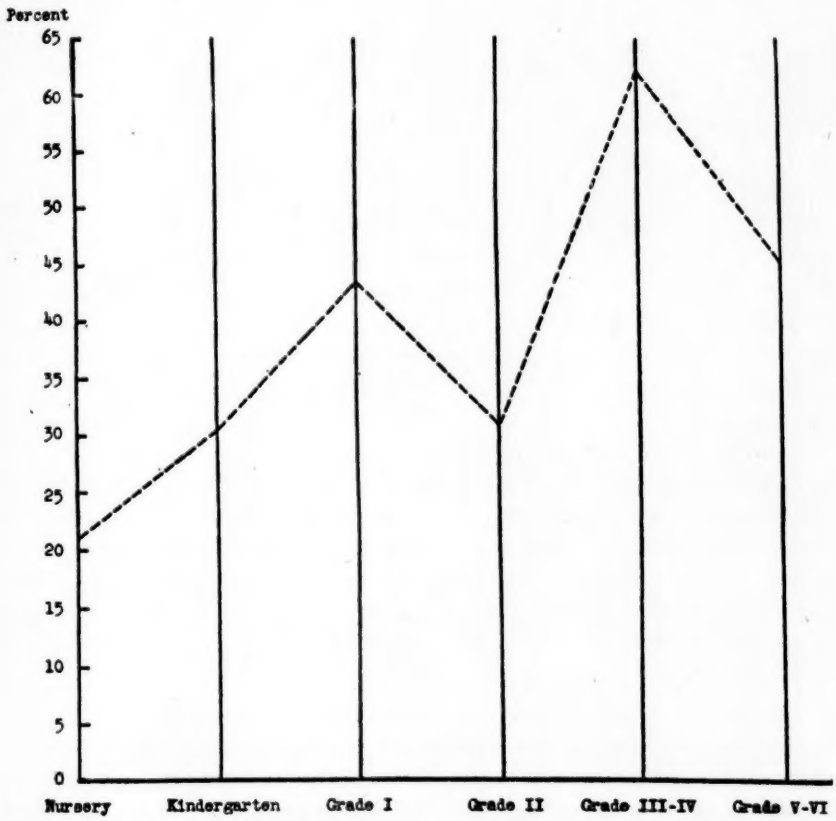


Fig. 2.—Percentage of Children in Each Group Who Appear within the Same Ring of the Sociogram for Both Fall and Spring Sociometric Tests.

Fig. 1.—Percentage of Children Chosen in Excess of Chance Expectancy in Each Sociometric Test.

distinct, is incorporated in the single percentage value for the combined class.

Isolation. Indices of isolation for each sociometric test are presented in Table X. To indicate the variable significance of a given number of

TABLE X

PROBABILITIES OF CHANCE OCCURRENCE FOR OBSERVED NUMBER OF ISOLATED IN EACH SOCIOMETRIC TEST

Group	Time of Test	Size of Group	Number of Observed Isolates	Probability of Chance Occurrence
Nursery	Fall	18	1	.036
	Spring	16	0	.008
Kindergarten	Fall	25	2	.040
	Spring	21	1	.023
Grade I	Fall	26	0	.002
	Spring	22	0	.003
Grade II	Fall	18	0	.005
	Spring	14	1	.076
Grade III-IV	Fall	33	4	.068
	Spring	29	1	.009
Grade V-VI	Fall	31	1	.007
	Spring	31	0	.001

isolates in groups of varying size, the number of children in each class as well as the frequency of observed isolates is given in the table along with the requisite index. The data from Table X are presented graphically in Figure 3. As before, the solid and broken portions of the curve differentiate between changes *within* and *between* grades. The solid horizontal line across the central portion of the chart shows the expected value. Deviations in excess of this value appear above the line; negative deviations are indicated below. The two broken horizontal lines delineate regions of statistical significance; events falling outside the band between these two lines have probabilities of chance occurrence of .02 or less. It will be observed that the number of isolates appearing in each sociometric test is, in general, significantly smaller than the number to be expected by chance, but that no pronounced trends are evidenced. Except in Grade II, a slight tendency for decrease of isolation *within* the grade may be noted.

Neglect. Isolation is defined in terms of raw social status score. Thus its significance varies, as has been shown, in diverse sociometric situations. The question may be raised whether it would not be advantageous to investigate variations in the periphery of the sociogram in terms of a definition based on deviation from chance expectancy—a definition analogous to the

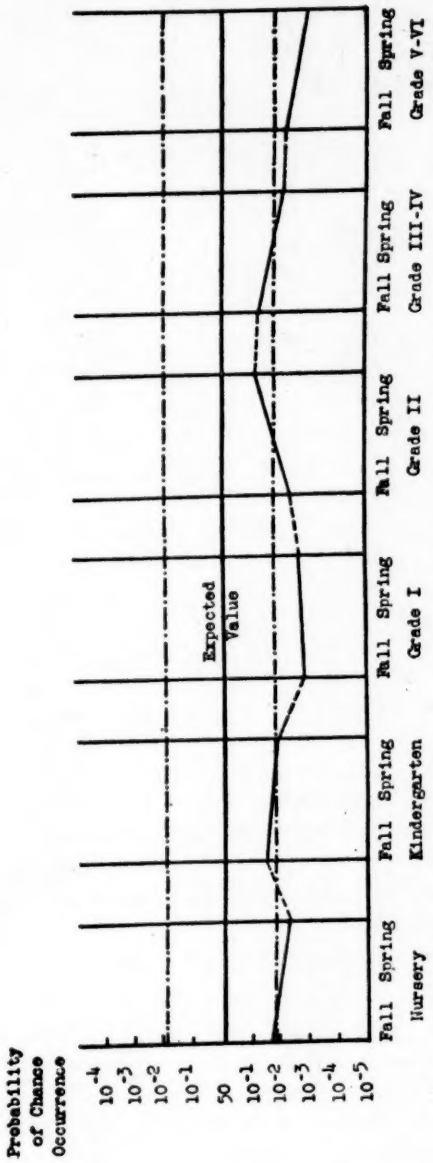


Fig. 3.—Probabilities of Chance Occurrence for Observed Number of Isolates in Each Sociometric Test.

— · — · — Levels of Significance.

one already proposed for Moreno's concept of *star*. Since the word "isolate" is not literally applicable, the term "neglectee" may be utilized in referring to all individuals in the outer ring of the sociogram—that is, all those who have received a number of choices so small as to be statistically significant. The proportions of such neglectees found in each sociometric test is given in Table XI and the data are presented graphically by line (B) in Figure 4.

TABLE XI

PERCENTAGE OF CHILDREN APPEARING AS NEGLECTEES IN EACH SOCIOMETRIC TEST

Group	Time of Test	Size of Group	Children Appearing as Neglectees	
			Number	Per Cent
Nursery	Fall	18	7	39
	Spring	16	2	12
Kindergarten	Fall	25	9	36
	Spring	21	4	19
Grade I	Fall	26	5	19
	Spring	22	5	23
Grade II	Fall	18	0	0
	Spring	14	4	29
Grade III-IV	Fall	33	8	24
	Spring	29	6	21
Grade V-VI	Fall	31	7	22
	Spring	31	4	13
Total		284	61	21.5

It is of interest to note that, except in the middle range, this line is in measure a mirror image of the curve in Figure 1 and complements the generalization suggested by that graph. The proportion of neglectees tends to *decrease* as the members of the group become better acquainted and is likely to be smaller for older age groups.

Stardom. Consistent with the general tendencies thus far described are the trends revealed by an analysis of stardom. As shown in Table XII and Figure 4 (line A), the percentage of stars increases slightly in the primary grades. Moreover, if one proceeds to investigate the degree of deviation attained by individual stars, it becomes evident that, though stars cease to increase in frequency in the elementary grades, they continue to increase in intensity up to the sixth grade level. This is indicated by the data in Table XIII and Figure 5 which show the probability of chance occurrence for the highest number of choices attained by any one child in each sociometric test. Since the probability frequently approaches infinitesimal values, the standard

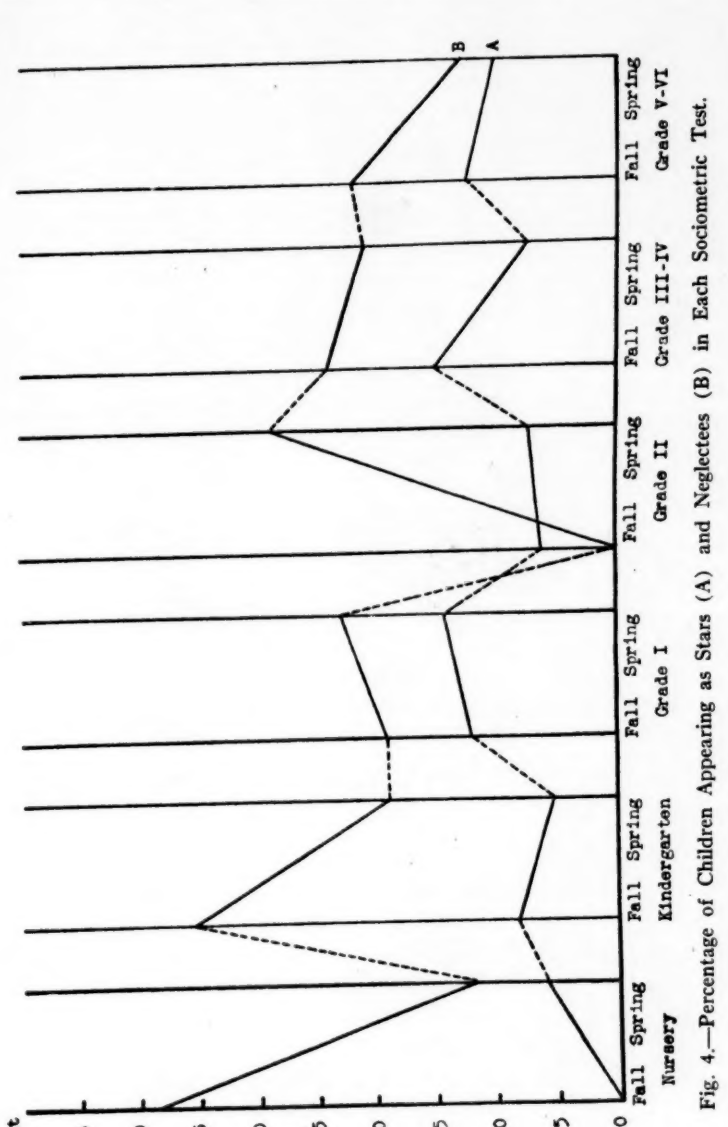


Fig. 4.—Percentage of Children Appearing as Stars (A) and Neglectees (B) in Each Sociometric Test.

TABLE XII

PERCENTAGE OF CHILDREN APPEARING AS STARS IN EACH SOCIOMETRIC TEST

Group	Time of Test	Size of Group	Children Appearing as Stars	
			Number	Per Cent
Nursery	Fall	18	0	0
	Spring	16	1	6
Kindergarten	Fall	25	2	8
	Spring	21	1	5
Grade I	Fall	26	3	12
	Spring	22	3	14
Grade II	Fall	18	1	6
	Spring	14	1	7
Grade III-IV	Fall	33	5	15
	Spring	29	2	7
Grade V-VI	Fall	31	4	13
	Spring	31	3	10
Total		284	26	9.2

TABLE XIII

STANDARD SCORE EQUIVALENTS AND APPROXIMATE PROBABILITIES OF CHANCE OCCURRENCE FOR THE HIGHEST NUMBER OF CHOICES RECEIVED BY ANY ONE PERSON IN EACH SOCIOMETRIC TEST

Group	Time of Test	Size of Group	Highest Number of Choices Received by Any One Person	Standard Score Equivalent	Approximate Probability of Chance Occurrence
Nursery	Fall	18	10	+ .55	.28
	Spring	16	17	3.16	$2 \cdot 10^{-3}$
Kindergarten	Fall	25	23	5.16	$1 \cdot 10^{-5}$
	Spring	21	18	3.44	$1 \cdot 10^{-3}$
Grade I	Fall	26	23	5.15	10^{-5}
	Spring	22	22	4.86	$2 \cdot 10^{-5}$
Grade II	Fall	18	17	3.12	$2 \cdot 10^{-3}$
	Spring	14	16	2.85	$4 \cdot 10^{-3}$
Grade III-IV	Fall	33	21	4.38	$1 \cdot 10^{-4}$
	Spring	29	19	3.71	$4 \cdot 10^{-4}$
Grade V-VI	Fall	31	28	6.84	....
	Spring	31	33	8.60	....

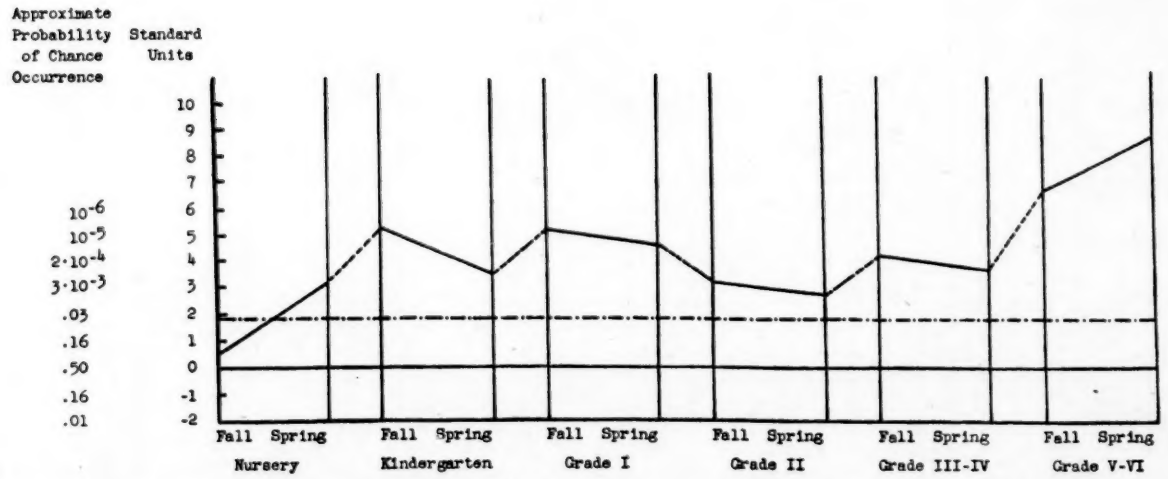


Fig. 5.—Standard Deviations and Probabilities of Chance Occurrence for the Highest Number of Choices Received by Any One Person in Each Sociometric Test.

— — — — Level of Significance.

score equivalents for the raw score values are given in the table, and to facilitate comparison of extreme deviations the ordinate axis of the graph has been calibrated in standard units.[8] As before, deviations significantly in excess of chance expectancy are shown above the broken horizontal line. The increase in intensity of stardom is clearly evidenced by the rise in the curve from left to right.

A further examination of Figure 5 reveals a secondary trend in the variation of intensity of stardom. In the graph, the solid portion of the curve displays a small but fairly consistent negative gradient; that is, *within* the grade the intensity of stardom tends to decrease slightly.

Taken together, the data on frequency and intensity of stardom prompt the following generalizations. The number of children commanding a large portion of their classmates' attention is relatively small (not above 15 per cent) and tends to increase slightly from one grade level to the next. The attention which the star commands also increases from class to class but appears to drop slightly *within* the grade. Finally, as clearly shown in Figure 4, the proportion of stars is almost without exception lower than the proportion of neglectees. This complements the evidence cited earlier to the effect that in sociometric situations negative deviations are more frequent than positive ones, though they are generally not as marked. The data suggest the conclusion that in classroom groups the proportion of overlooked or rejected children is greater than the proportion of children who are exceptionally popular and acceptable.

Coherence. An examination of sociometric data for the successive grades suggests that there is a gradual rise in degree of coherence as one passes from younger to older groups. The increase in number of mutual ties in the early grades is evident upon inspection. It will be noted further that while clique structures are present in the middle grades, by the V-VI level they become completely consolidated into two sub-groups—one for each sex.

The existence of the trend is further corroborated by the indices of coherence computed for the several groups. These values are given in Table XIV and are depicted graphically in Figure 6. Since the obtained probabilities frequently approach infinitesimal values, standard score equivalents for facilitating comparison of extreme deviations are again given both in the table and the graph. As before, the solid horizontal line across the central portion of the chart represents the expected value with deviations in excess of the value shown above the line and negative deviations below. Regions

[8]Comparison in terms of standard units is possible since the skewness is practically identical for all the distributions under consideration.

TABLE XIV

STANDARD SCORE EQUIVALENTS AND APPROXIMATE PROBABILITIES OF CHANCE OCCURRENCE FOR OBSERVED NUMBER OF MUTUAL CHOICES IN EACH SOCIOMETRIC TEST

Group	Time of Test	Size of Group	Number of Mutual Choices	Standard Score Equivalent	Probability of Chance Occurrence
Nursery	Fall	18	7	—1.86	—.02
	Spring	16	13	— .41	—.41
Kindergarten	Fall	25	20	+1.36	+.09
	Spring	21	24	2.53	.01
Grade I	Fall	26	19	1.32	.10
	Spring	22	21	1.80	.04
Grade II	Fall	18	38	6.44	...
	Spring	14	23	2.22	.02
Grade III-IV	Fall	33	55	10.70	...
	Spring	29	59	12.40	...
Grade V-VI	Fall	31	53	10.64	...
	Spring	31	57	11.74	...

of statistical significance (.02 or less) occur outside the band between the two broken lines. As will be noted from the graph, the index shows a definite increase in degree of coherence from the lowest to the highest grade. In the fall sociometric test for the Nursery, the number of mutual choices is so small as to be statistically significant; yet levels significantly *in excess* of chance expectancy appear as early as in the Kindergarten and in Grade I, while beyond Grade II the probability of chance occurrence for the observed number of mutual choices becomes infinitesimal.[9]

A further inspection of Figure 6 suggests the more specific generalization that there is a consistent rise in degree of coherence *within* each group over the five to seven month period between tests. Only Grade II shows a drop in index for this interval, and as indicated below (page 43) special conditions of increased cleavage may account for this departure from the general trend.

[9]It is of interest to note that when, in the preliminary investigations, indices of coherence were computed on the basis of person-score rather than choice-score (see page 11), values markedly in excess of chance expectancy were not obtained. Indeed, in the fall sociometric tests for the Nursery, Kindergarten, and Grade I the values were so *small* as to be statistically significant; that is, despite the fact that in two of the groups (Kindergarten and Grade I—see Figure 22) the number of mutual bonds between *choices* exceeded chance expectancy by a good margin, the number of mutual bonds between *persons* was significantly *short* of the expected value. These facts suggest that while children may be involved in numerous reciprocated social relationships, these relationships involve a comparatively small number of different persons.

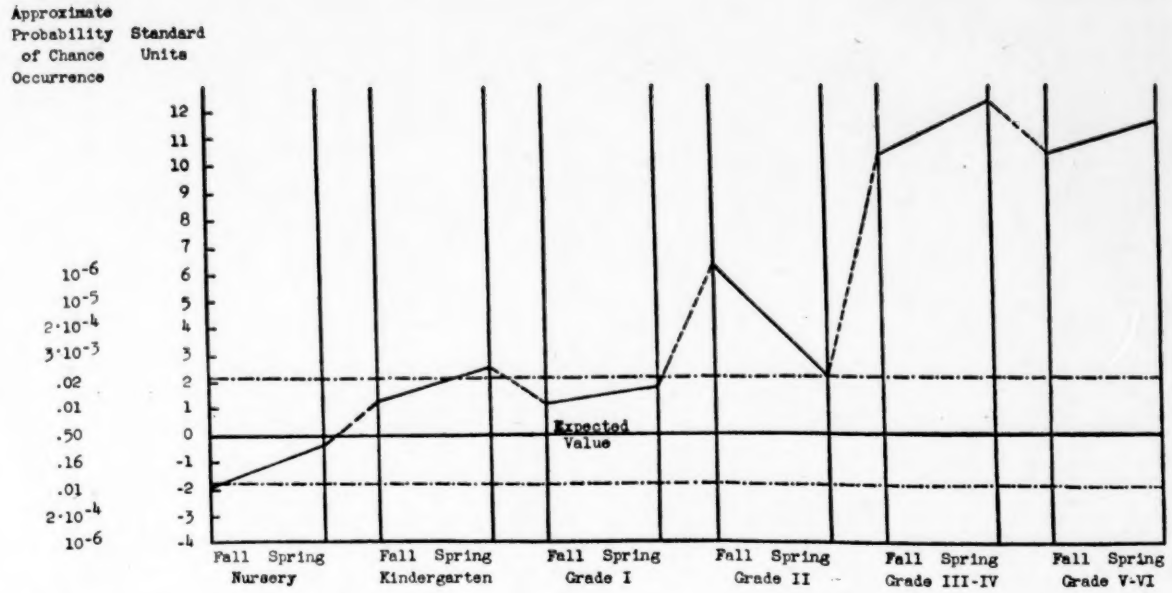


Fig. 6.—Standard Deviations and Probabilities of Chance Occurrence for Observed Mutual Choices in Each Sociometric Test. — - — - — Levels of Significance.

Consistent with the generalization cited is the tendency, evidenced in the sociograms, for clique structures appearing in the fall to become articulated and amalgamated by the time of the spring test. A marked exception to this trend occurs in Grade III-IV, where, despite the increase in index of coherence, distinct clique structures are more numerous in the spring than in the fall target. It would appear that in this group, though choices were reciprocated more frequently after a half-year's acquaintance, factors restricting the direction of choice had arisen. The possible nature of these factors is indicated in subsequent discussion (page 43).

The gradient in index of coherence *between* successive grade groups is not constant. The most conspicuous increases occur in passing from the first to the second-grade level, and in turn from this to the Grade III-IV group, the latter being the most pronounced index shift observed in the experiment. This increment is in part made possible by the marked drop in index within Grade II; a second contributive factor may be the cumulative effect produced by a combined group composed of children from two grade levels.

Sex Cleavage. An examination of the sociograms suggests that cleavage on the basis of sex increases for successive grade levels and becomes highly marked in the V-VI group. Except in Grade II, where cleavage in mutual choices first becomes complete, the trend *within* the group appears to be one of slightly increasing relationship between the sexes. These suggestions are borne out by a mathematical analysis of girl-boy and boy-girl choices. Indices for each type are presented in Table XV. Consistent with previous usage, the term "girl-boy" refers to girls' choices of boys; and conversely "boy-girl" refers to boys' choices of girls. The form of the table is identical with that of Table XIV save that, because of their infinitesimal magnitude, probabilities of chance occurrence have not been indicated. Trends in variation are more readily identified by reference to Figure 7 which presents results in graphic form. Indices for girl-boy choice are shown by line B; those for boy-girl choice, by line A. Since deviations are all negative, an increase in cleavage (decrease in inter-sex choice) is indicated in the graph by a drop from left to right. It will be noted that cleavage is present in a significant degree from the Nursery level on. Except in Grade III-IV, the general tendency is for girls to choose boys even less frequently than boys choose girls. The increase in cleavage *between* groups is fairly consistent—particularly for girl-boy choices. As suggested by inspection of the sociograms, a slight decrease in cleavage *within* the group appears in every class except Grade II, and possibly Grade V-VI. Grade II is the only group wherein a decrease in frequency of inter-sex choice occurs over the five- to seven-month

TABLE XV

STANDARD SCORE EQUIVALENTS FOR OBSERVED NUMBER OF GIRL-BOY AND BOY-GIRL CHOICES IN EACH SOCIOMETRIC TEST

Group	Time of Test	Size of Group	Girl-Boy Choices		Boy-Girl Choices	
			Number	Standard Score Equivalent	Number	Standard Score Equivalent
Nursery	Fall	18	15	—6.23	16	—6.00
	Spring	16	20	—4.39	31	—1.73
Kindergarten	Fall	25	6	—9.21	20	—7.68
	Spring	21	20	—5.52	22	—6.17
Grade I	Fall	26	21	—7.49	40	—3.92
	Spring	22	23	—6.03	39	—2.48
Grade II	Fall	18	19	—5.64	10	—6.98
	Spring	14	5	—7.97	4	—7.05
Grade III-IV	Fall	33	1	—10.79	1	—13.59
	Spring	29	12	—8.77	12	—10.61
Grade V-VI	Fall	31	5	—13.72	5	—7.94
	Spring	31	5	—13.53	2	—8.90

period between tests. It will be recalled that this group is also the first to show complete cleavage in mutual choices.

The disparity and crossing-over of indices for the two highest groups may be in part an artifact produced by the unequal proportion of boys and girls. As seen from Table XV the actual number of girl-boy and boy-girl choices is exceedingly small in both groups, while the ratio of girls to boys shifts from a very high to a very low proportion. It is this shift in ratio rather than a genuine reversal in inter-sex choice that is reflected by the indices. The difficulty cannot be avoided inasmuch as the number of subjects in each dichotomy fixes a ceiling for whatever type of index may be derived, and where the ratio is unequal the ceiling levels are necessarily unequal also.

An examination of the sociometric data reveals a somewhat unexpected reappearance of mutual choices between the sexes in the spring test for Grade III-IV. This is accompanied by a decided decrease in indices of inter-sex cleavage of both types. That these data reflect actual behavior is confirmed by the observations of the investigator and the reports of the teacher. It was indeed "spring": pre-adolescent "crushes" made their first appearance in this group during the second semester.

The fact that the degree of cleavage may be determined and altered in accordance with circumstance is further illustrated by the results obtained for the leadership criterion. Particularly at the V-VI level, where cleavage

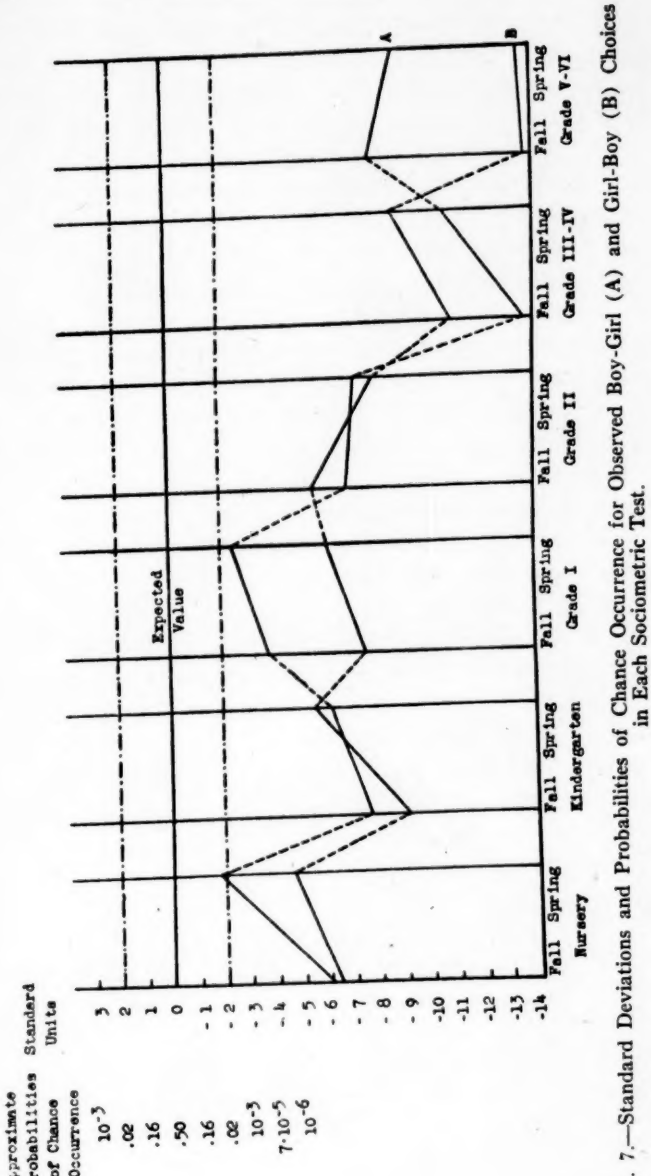


Fig. 7.—Standard Deviations and Probabilities of Chance Occurrence for Observed Boy-Girl (A) and Girl-Boy (B) Choices in Each Sociometric Test.

— · — · — Levels of Significance.

on the basis of the other criteria was almost complete, girls consistently picked boys in their selection of a leader.

It is of interest to note that the marked shifts in inter-sex cleavage observed in Grade II and Grade III-IV are accompanied by disturbances in other indices as well. It has already been pointed out, for example, that mutual choices show an unexpected drop at the second grade level. This is doubtless related to the disappearance of mutual choices between the sexes in that group. Other departures from general trends occurring at the second grade level are seen in Figures 2, 3, and 4 which portray degree of variation in constancy, isolation, and neglect.

In Grade III-IV, the paradoxical increase in clique structures accompanying the rise in degree of coherence (Figure 6) becomes meaningful when one considers the possible effects of rivalry and "intrigue" among children experiencing their first "crushes." The establishing of paired relationships between the sexes is not unlikely to break up the group into sets, each possessing a high degree of coherence within itself.

In summary, the data presented above suggest the following generalizations regarding cleavage between the sexes on the basis of criteria of work, play, and seating. A significant level of cleavage is apparent even at the nursery level. While acquaintance over a period of half a year appears to break down barriers to a slight degree, preference for the same sex continues to increase from grade to grade. A particularly pronounced rise in cleavage occurs at and about the second grade level. Departures from the general trend in the upper elementary grades, though they are produced in part by statistical artifacts, may presage a shift in the frequency and character of inter-sex choice accompanying adolescence.

Grade Cleavage. An inspection of the sociometric choices prompts the impression that in the combined groups horizontal cleavage on the basis of grade is also present. To confirm this impression, indices for inter-grade choice were computed and are given in Table XVI. Graphical presentation of these data in Figure 8 reveals that a significant degree of cleavage is present in all sociometric tests for the combined groups. In Grade III-IV, the frequency of inter-grade choices increases over the five month period between tests (possibly a reflection of the rise in inter-sex choices, which cross grade lines indiscriminately). The gradient is reversed for the corresponding interval in Grade V-VI. In both groups, choices from the higher to the lower grade were even less frequent than choices from the lower to the higher.

TABLE XVI

STANDARD SCORE EQUIVALENTS AND PROBABILITIES OF CHANCE OCCURRENCE FOR OBSERVED NUMBER OF INTER-GRADE CHOICES WITHIN COMBINED GROUPS

Group	Time of Test	Size of Group	Choices from Lower to Higher Grade			Choices from Higher to Lower Grade		
			Number	Standard Score Equivalent	Probability of Chance Occurrence	Number	Standard Score Equivalent	Probability of Chance Occurrence
Grade III-IV	Fall	33	37	—5.76	. . .	20	—9.84	. . .
	Spring	29	35	—4.56	$3 \cdot 10^{-6}$	31	—6.71	. . .
Grade V-VI	Fall	31	56	—2.67	$4 \cdot 10^{-3}$	40	—4.99	. . .
	Spring	31	49	—3.93	$4 \cdot 10^{-5}$	28	—6.93	. . .

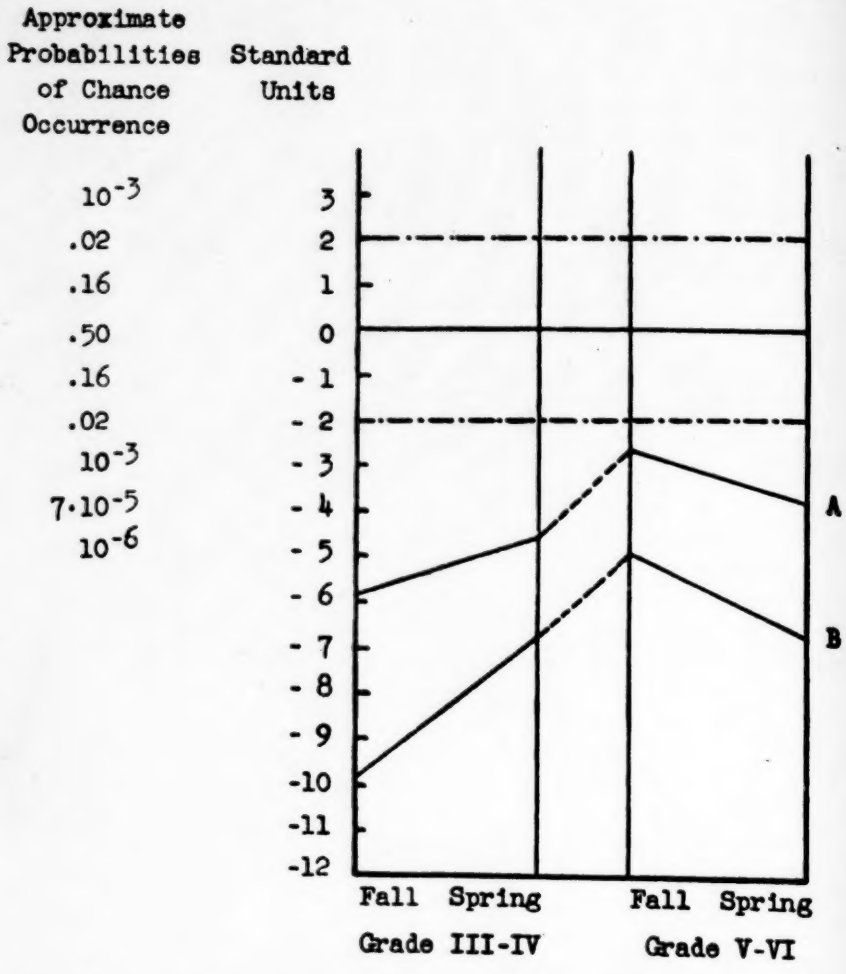


Fig. 8.—Standard Deviations and Probabilities of Chance Occurrence for Observed Inter-Grade Choices within Combined Groups.

A—Choice from the Lower to the Higher Grade.
B—Choice from the Higher to Lower Grade.
— - - - - —Levels of Significance.

SECTION 3

Simplified Methods for Applying Refined Sociometric Techniques

It cannot be denied that the mathematical knowledge and skill required for computing and interpreting refined indices of sociometric status, coherence, and cleavage are such as to make the methods impractical for general use by

teachers, psychologists, and social workers. Fortunately, however, experience from the present study suggests that, once certain limits of applicability are defined, several of the basic techniques may be divested of their mathematical complexities without too great a loss in the accuracy of results. For example, with regard to indices of sociometric status, it was observed in the course of experimentation that with the number of criteria and allotted choices held constant (each equal to three), levels of significance were little affected by variation in the size of the group. Thus whether the class consisted of sixteen or of thirty-three persons, a raw score of 3 choices represented the limit of statistical significance for minimal occurrence; that is, at either extreme of group size, a raw score of 3 or less was so small as to be expected by chance less than two times in a hundred; similarly, for either group, a raw score of 15 choices corresponded to the limit of significance for events in excess of chance expectancy. Further investigation revealed that, except for values above 15, any given raw score had, within reasonable limits, approximately the same probability of chance occurrence in any one of the twelve sociometric tests. In other words, little accuracy would have been lost had the raw score itself, rather than the probability index, been used directly as a measure of sociometric status.

Additional mathematical analysis by methods described in Part I showed that such conditions of comparability obtain generally in the most common sociometric situations where the number of choices allotted per person for each criterion is no greater than five, the number of criteria does not exceed three, and the groups include no less than ten and no more than fifty persons.[10] Provided the number of criteria and choices allotted are held constant from group to group, levels of significance are little influenced by variation in size and any given score below the upper limit of significance represents about the same degree of deviation from chance expectancy. Consequently, though not suitable for detailed or carefully controlled study, within the indicated limits the *raw status score* affords a fairly reliable index of sociometric status. If levels of significance are determined in advance, raw scores may be used directly in the construction of sociometric targets with areas delineated in terms of deviation from chance expectancy. In order to make the prepara-

[10]In current sociometric practice, the number of criteria or choices allotted rarely exceed the values cited above. It is possible that even when as many as four or five criteria are utilized, conditions of comparability will still obtain within acceptable limits, particularly if the groups contain no less than twenty-five or thirty persons. Actual computation of probabilities (by reference to the Pearson Type III Curve) would be necessary to verify the fact, and this may be done should occasion for so elaborate a sociometric test arise.

tions of such sociograms possible, the raw score values corresponding to limits of significance for the most common sociometric situations are given in Table XVII. The table and its use are described below.

In Table XVII, types of sociometric situation are defined in terms of

TABLE XVII

CRITICAL RAW STATUS SCORE VALUES FOR DIVERSE SOCIOMETRIC SITUATIONS

Number of Choices Allotted to Each Person for Each Criterion	One Criterion Critical Scores			Two Criteria Critical Scores			Three Criteria Critical Scores		
	Expected Value	Lower Limit	Upper Limit	Expected Value	Lower Limit	Upper Limit	Expected Value	Lower Limit	Upper Limit
1	1	None	4	2	None	6	3	0	8
2	2	None	6	4	0	9	6	1	12
3	3	0	7	6	1	11	9	3	15
4	4	0	8	8	2	13	12	5	18
5	5	1	9	10	4	16	15	9	22

the number of choices allotted per person for each criterion and the number of criteria. For each type of sociometric setting the following data are given: (1) the expected value or mean score, which indicates the raw score to be represented on the target by the second circle (counting from the center); (2) the raw score corresponding to the limit of statistical significance for events falling *short* of chance expectancy; (3) the raw score corresponding to the limit of statistical significance for events occurring *in excess* of chance expectancy.[11] To cite an illustration: consider a sociometric situation in which *two questions* have been asked and the subject requested to name *three persons* as associates for each of the two activities described in the questions; that is, there are *two* criteria with *three* choices allotted per person for each. Reference to Table XVII under the column headed "Two Criteria" reveals that under such conditions the number of choices a person is most likely to receive by chance is 6, that a raw score of 1 or less is so small as to be statistically significant, and that a score of 11 or more is significantly in excess of chance expectancy. Thus in the construction of the sociogram, persons with scores of 11 or greater are placed in the innermost circle and classified as stars, those with scores of 1 or less are placed in the outermost ring and classified as neglectees, and the remainder are distributed in the two intermediate rings with persons scoring above six in the inner of the two rings and those scoring below six in the outer one.

The considerations outlined above are similarly applicable to indices of

[11]The limits of significance are not absolutely identical for all groups. While generally in the neighborhood of .02 or .03, they may rise as high as .05 in groups numbering fewer than about fifteen or more than thirty-five persons.

coherence. In groups varying in size from about ten to fifty persons, the probability that a given number of mutual choices will occur by chance is relatively unaffected provided the number of criteria and choices allotted remains fixed. Consequently, the sheer number of mutual choices observed may be utilized directly with reasonable confidence as a fairly reliable index of group coherence. Raw score values corresponding to limits of significance for the more common types of sociometric situation are given in Table XVIII.

TABLE XVIII

CRITICAL RAW MUTUAL CHOICE SCORE VALUES FOR DIVERSE SOCIOMETRIC SITUATIONS

Number of Choices Allotted Each Person for Each Criterion	One Criterion Critical Scores		Two Criteria Critical Scores		Three Criteria Critical Scores	
	Lower Limit	Upper Limit	Lower Limit	Upper Limit	Lower Limit	Upper Limit
1	None	3	None	4	None	6
2	None	7	0	10	1	13
3	0	10	3	17	7	23
4	3	15	9	26	16	36
5	7	21	16	37	27	53

The table is of the same form as Table XVII and is interpreted in similar manner. For example, given the conditions of three criteria with five choices allotted for each, 53 or more observed mutual choices are significantly in excess of chance expectancy while 27 or fewer mutual choices fall significantly short of the expected value. When obtained, such extreme scores would suggest respectively the presence and absence of group solidarity.[12]

Unfortunately, indices of group cleavage, since they are a function of the ratio between sizes of sub-groups, cannot be reduced to simplified raw score equivalents. If cleavage is to be studied without recourse to probability indices perhaps a practicable if not rigorous method is that of determining the ratio of inter-class choices to the total number of choices available—for example, the proportion between the number of girl-boy choices and the total number of choices made by girls. Difficulties will be encountered, however, in determining the significance of a given ratio.

In summary, for sociometric situations involving as many as three criteria with five choices allotted per person, the total number of choices received by each child may be used with reasonable confidence as a reliable index of sociometric status provided the number of criteria and choices allotted remains constant for all groups tested; similarly, the total number of mutual choices may be utilized for the comparative study of group coherence. Once

[12]The values in Table XVII of course apply only when mutual choice is defined in terms of relationship between *choices* on the same criterion.

differential levels of choice are established, results may be depicted graphically on a target and an analysis made of the proportion of neglectees, stars, etc. Used in conjunction with indices of coherence these data will permit comparison between groups and identification of trends.

SECTION 4

Conclusions

In the light of the discussion and evidence submitted in the course of this paper, certain generalizations appear warranted. The generalizations are of two general types: those pertaining to technique, and those pertaining to experimental results.

I. Technique

Conclusions with regard to technique may be regarded as fairly well established. They include the following:

1. Social status, structure, and development may be studied effectively by means of refined mathematical techniques adapted for use in diverse sociometric situations.

2. The concept of deviation from chance expectancy provides a basis for deriving indices which may be used for the estimation and comparison of social status, of the degree of coherence within social groups, and of the extent of group cleavage on the basis of such factors as sex, age, race, nationality, or similar attributes.

3. Definition of sociometric status and structure in terms of deviation from chance expectancy (e.g. neglectees and stars) permits identification of trends otherwise obscured.

4. Certain of the techniques developed may be divested of their mathematical complexities and are thus adaptable for general use by teachers, psychologists, and social workers. Specifically, within established limits, raw sociometric scores may be legitimately utilized for the comparative and longitudinal study of individual status and group coherence.

II. Experimental Results

The generalizations derived from the experimental results are, for the most part, to be regarded as suggestive rather than final. They represent conclusions to be verified and principles to be taken into account in subsequent definitive research. The generalizations may be conveniently classified under the three major topics: status, structure, and development.

1. *Status*

5. *Components of Sociometric Status.* The components of sociometric

status, determined by the specific criteria utilized, are generally interrelated; that is, persons considered desirable as associates in one situation are generally considered desirable in other situations as well. However, considerable variation may occur in individual instances. These facts are indicated by the magnitude of correlation coefficients between ranks on the several criteria taken separately.

6. *Neglect and Rejection.* In classroom sociometric situations, a few persons are chosen so seldom in comparison with chance expectancy as to confirm the existence of social forces of neglect or rejection.[13]

7. *Stardom.* In classroom sociometric situations, a few persons are chosen so far in excess of chance expectancy as to confirm the existence of social forces of acceptance and attraction.[14]

2. *Structure*

8. *Distribution of Status.* In classroom sociometric structures, negative deviations in social status are more frequent, though not as extreme, as positive deviations. Two major manifestations of this trend were observed in the present study: (1) Fewer than half the children in each group were chosen in excess of chance expectancy, but when so chosen they received a markedly undue proportion of the available choices; (2) Though an equal number would have been expected on the basis of chance, the proportion of neglectees was generally greater than the proportion of stars.

---

[13]The terms "neglect" and "rejection" are both used advisedly. A phase of the experimentation which, for lack of space, cannot be reported here in detail involved clinical observation and case studies of all children in the six groups. This investigation revealed that, while a variety of factors may be associated with extreme negative sociometric deviation, it is frequently accompanied by inferior mental and academic status, by marked asocial behavior, and by general psychological immaturity. Two types of deviates were found—those who actively manifested offensive or undesirable behavior and were consciously *rejected* by their classmates, and those who were so inconspicuous and colorless as to be simply overlooked or *neglected*. Rigid classification, however, is hazardous; the clinical evidence indicated rather strongly that the factors making for inferior social status were manifold and interwoven into complex patterns. In the final analysis, the individual case study provides the best approach to the understanding of the genesis of sociometric inferiority.

[14]Though the trend was not as marked as in the case of negative social deviates, clinical evidence showed that the stars were generally among the brighter and more accomplished children in the class. They exhibited a minimum of asocial behavior and were generally recognized by adults as happy, well-liked, and well-adjusted. Once again, the variety and complexity of circumstances and traits accompanying extreme (in this case, positive) sociometric deviation point to the individual case study as the *sine qua non* for determining the psychological significance of sociometric results.

9. *Coherence.* In classroom sociometric situations, the frequency of mutual choices is usually so far in excess of chance expectancy as to confirm the existence of social forces of group coherence or solidarity. Occasionally, in groups composed of very young children, the number of reciprocated selections may be small enough to indicate a state of social disorganization and disjunction.

10. *Sex Cleavage.* In classroom sociometric structures, a marked degree of cleavage along sex lines is generally shown. In the groups studied, a division on the basis of sex was present at significant levels in all classes from Nursery to Grade V-VI. This was with respect to criteria of work, play, and seating only; for girls, cleavage was not present with respect to the criterion of leadership.

11. *Grade Cleavage.* Classes which have been separate for a period of years and are then merged into combined groups, preserve an integrity and discreteness of social structure even after a five month interval. This was demonstrated by the high indices of grade-cleavage secured in the two amalgamated groups—Grade III-IV and Grade V-VI.

3. *Development*

The conclusions concerning developmental change in social status and structure are derived jointly from cross-sectional and longitudinal data. While the same generalizations were usually indicated by both types of material, secondary fluctuations were occasionally perceived within the more pronounced primary trends.

A. Primary Trends

12. *Frequency of Positive Social Deviation.* In classroom situations, the size of the minority commanding a relatively large proportion of attention increases as the members of groups become better acquainted and more mature. This tendency was manifested in the experimental results by the increase, as one passed from lower to higher grade levels, in the proportion of stars and in the percentage of children falling within the second circle of the sociogram.

13. *Intensity of Positive Social Deviation.* In classroom situations, the amount of attention commanded by persons who are centers of attraction becomes increasingly great in older age groups. This trend was reflected in the experimental results by the increase in degree of deviation for the most conspicuous star at each successive grade level.

14. *Frequency of Negative Social Deviation.* In classroom situations, the percentage of children rejected or neglected by their classmates decreases

as the members of the group become better acquainted and more mature. While some of these children are drawn more closely into the group, the decrease is produced in part by the undue proportion of *withdrawals* among negative social deviates, particularly at the primary grade levels. Evidence in support of this generalization has already been mentioned in Paragraph 13. It may be supplemented by citing the decrease, as one passes from lower to higher grade levels, in the percentage of neglectees, and the high ratio of withdrawals for the two outermost rings of sociograms for the Nursery, Kindergarten, and Grade I groups.

15. *Coherence.* In classroom situations, the degree of group solidarity increases as the members of groups become better acquainted and more mature. This was evidenced in the experimental results by the rise in index of coherence for successive grade levels. The increase indicated that older children were involved in stronger mutual relationships with a greater number of their classmates.

16. *Sex Cleavage.* In classroom groups, the degree of sex cleavage increases as groups become older. The increase is inconsistent and subject to considerable variation. This was indicated in the experimental results by the curves in Figure 7.

17. *Constancy in Status.* In classroom situations, marked shifts in sociometric status are comparatively rare. On the whole, children tend to retain the same general social position and this tendency becomes more pronounced in older age groups. These generalizations were evidenced by the following experimental results: Of over 125 children included in the study, not one shifted across more than two rings of the target during the period of the study. The proportion of subjects moving over as many as two rings was not more than 10 per cent, and the ratio of children remaining in the some area of the target increased for successive grade levels.

18. *Variation in Status.* Apart from changes *within* the individual, social status is not without its dynamic aspects. As clearly indicated by the primary and secondary trends reported in this section, various positions in the social structure are accompanied by positive or negative *valence.* The individuals occupying these positions will, over a period of time, exhibit a shift in status engendered by forces within the social structure itself. In view of this fact, complete status constancy is not to be expected, and variation in status must be interpreted not only in terms of change in individual social or psychological adjustment, but also in terms of group developmental trends.

19. *Interdependence of Structure.* Developmental trends in social status and structure are interdependent. Thus an irregularity in one aspect

of group development, such as social coherence, may be merely the reflection of a marked but consistent change in the degree of sex cleavage. Such interdependence was evidenced in the experimental results for Grade II.

20. *Inconsistency in Development Trends.* Both primary and secondary trends are subject to irregularities. Such departures may frequently be related to specific social circumstances or clinical events. For example, the unexpected drop in sex cleavage shown in Grade III-IV is understandable in the light of the clinical report concerning the appearance of pre-adolescent "crushes".

B. Secondary Trends

21. *Differentiation of Criteria.* In sociometric situations, as the members of the group become better acquainted, discrimination on the basis of activity in the selection of associates becomes slightly more pronounced. This was evidenced in the experimental results by the decrease, after a half-year period, in the magnitude of rank correlation coefficients between raw sociometric scores on the basis of the several criteria taken separately.

22. *Intensity of Stardom.* As members of groups become better acquainted, the amount of attention commanded by persons who are centers of attraction decreases slightly. This trend was manifested in the experimental data by the drop in intensity of stardom within groups over the half-year period between tests.

23. *Degree of Isolation.* In classroom sociometric situations, the amount of isolation, as revealed by an index based on deviation from chance expectancy, decreases slightly as members of the group become better acquainted.

24. *Sex Cleavage.* In classroom sociometric situations, the frequency of desired association between the sexes increases slightly as the members of the group become better acquainted. However, the degree of sex cleavage remains significantly high.

C. Summary

Classroom groups composed of older children show greater social solidarity than younger age groups. In the former, negative social deviates have either been eliminated or been more closely absorbed into the group structure; positive social deviates are both more frequent and more marked. In the upper elementary classes, sex cleavage becomes very pronounced. At all levels, the group structure becomes more compact as the members of the group become better acquainted. All of the above developmental trends are interdependent and subject to irregularity in direction and intensity.

* * *

In sum, the proper evaluation of social status and structure requires the envisagement both of the individual and the group as developing organic units. Piecemeal analysis, fixed in time and space, of isolated aspects and attributes is insufficient and even misleading, for the elements of social status and structure are interdependent, organized into complex patterns, and subject both to random and lawful variation.

EXPLANATORY NOTE

The term "ring" in the table IX and figure 2, page 51, refers to one of four concentric areas on a diagram patterned after Northway's "target sociogram" (SOCIOMETRY, Volume III, April 1940). Persons receiving a number of choices so *small* as to be statistically significant (probability .02 or less) appear in the outermost ring. Those receiving a number of choices so *large* as to be statistically significant appear in the center. The two remaining, intermediate rings are separated by a circle representing the 50 per cent or the expected value, about which the majority of the subjects are clustered. A detailed discussion of this and other methods of graphic presentation will be published in a subsequent issue of SOCIOMETRY.

The concept of deviation from chance expectancy permits making the definition of stardom on page 54 more rigorous and precise. As here used, the term "star" refers to persons chosen significantly in excess of chance expectancy (probability .02 or less).

Limitations of space do not permit the presentation of the twelve sociograms depicting the relationships revealed by the sociometric tests. Reference is made to them in the sections on "coherence" on page 58, "sex cleavage" on page 61, and "grade cleavage" on page 64. These sociograms will appear in a more complete version of the present paper shortly to be published as a monograph.

IN MEMORIAM

Fannie French Morse

1866-1944

Dr. Fannie French Morse passed away on the 28th day of January in Winter Park, Florida, where she had lived since her retirement in 1937. To the very last she was active in social welfare and educational work. She was a great American woman whose significance will rise in years to come. Those who knew her recognized in her life work the heartbeat and soul of ideal community life and of ideal education.

Dr. Morse was born in Chesterville, Maine, on January 20, 1866. Her interests centered in art and social welfare. Upon her graduation from Maine Wesleyan Seminary she accepted a position in the Industrial School for Girls at Lancaster, Mass., where she soon became assistant superintendent. She resigned to marry Professor Walter Morse, and three years later was left a widow. Though still in her twenties she was recalled to the Lancaster School to head that institution. During the eight and one-half years of her administration there, Dr. Morse created an institution that came to national attention. She interpreted the under-privileged girl who came under the law as one needing opportunity and education rather than punishment.

Dr. Morse was called to Sauk Center, Minn., where she did pioneer work. There she conceived and built from her own plans an institution where social rehabilitation was carried out for the first time. She brought the community and institution together, and the school became a social laboratory for welfare organizations throughout the country.

Eleven years later Dr. Morse was called to Washington for a year under the Department of Justice, where she helped to standardize protective measures for women and children, conceiving and helping to put through an appropriation for a National Training School. She was one of the initial workers in Congress for the Federal Farm for Women in West Virginia, and served before Congressional Committees as an expert in modern institutional building and management. Dr. Morse also served on The White House Conference on Child Health and Protection under the Hoover Administration.

In 1923 Dr. Morse accepted appointment as Superintendent of the New York State School for Girls at Hudson, New York, where she remained until her retirement to Winter Park. Under her administration this institution was completely transformed from the old reformatory type into a school outstanding in its progressive educational program. To this school at Hudson came educators and social workers from all over the country and from abroad, to study its methods, and they acclaimed her unique achievements.

In recognition of her outstanding work, the Russell Sage College conferred on Dr. Morse an honorary degree in 1936.

While at Hudson Dr. Morse saw the significance of sociometry as conceived by Dr. Moreno, sponsored it, and made her school available for research. For more than one reason the book, "Who Shall Survive?" by J. L. Moreno is dedicated to "Fannie French Morse, Educator and Liberator of Youth".

Here was Dr. Moreno, who sought a "technique of freedom, a technique of balancing the social forces to the greatest possible harmony and unity for all". Where could he find such an ideal place of freedom for the demonstration of this technique? A miracle happened in a paradoxical way. Dr. Moreno found for his demonstration a real place of freedom in a reformatory: the Training School for Girls at Hudson, organized and shaped—as it was at that time—by the genius of Dr. Morse. A place of freedom that conduced the girls to enlightened choice by making them aware of the possibilities through learning and training, by awakening their imagination and sympathy to become choosers of the best, and by bestowing upon them dignity through the possession of freedom. By what magic did Dr. Morse create such a place of freedom? Dr. Moreno reports in his book, "Who Shall Survive?":

> "We met in Hudson with a unique form of administration which radiated from the superintendent into all directions: to release, to restrain, and to rule through aesthetic principles projected into the community. Aesthetic principles entering into every detail of living are a powerful device of an invisible government. Here we found exemplified the effects of education when it is not limited to a specific locality, the school alone, but is the very atmosphere itself of the whole community."

Dr. Morse had enacted in her own sphere, in a modern way, with modern means, the ideal of the great humanists: aesthetic education. She had enacted it with classical simplicity, far away from a dreaming aesthetic romanticism, in a genuinely practical way.

From Dr. Morse's life work, that grew organically and was part of her creative personality, could be drawn the example, lesson and theory of an organic education. In the future she may be recognized as one of the first humanists in education and community life. Her humanism started from the social bottom and is psychologically better motivated than historic humanism that reaches only the top of society. Her original methods, considered in their proper light, could solve the conflict of the two opposing camps in modern education: training versus liberal education.

Dr. Morse looked for and found in every child not the "average" indi-

vidual, but the creative individual. She made use of vocational training in a liberal sense. The child, rooted first in a humanized and socialized community where the ways of freedom guided it through the day in every detail of life, reached out with its creative urge for that particular training where it felt it could lead and excel or follow and be happy. Dr. Morse told me how she once made special provision for instruction in her school for a girl who had a great desire to be trained in plastic surgery, and how the fulfillment of this desire brought the girl to a successful career.

The aesthetic education that Dr. Morse implanted was not that of mere admiration of beauty, but of creation of beauty. The technical training that she made possible furthered this artistic aim. In her school were included courses in voice training, piano, painting and sculpture for all the girls who had the desire and aptitude. An appreciation of art grew out of work accomplished in all fields of human activity.

The educational methods of Dr. Morse are valid for any closed school community, and our whole school system could profit by adapting itself, as far as possible, to her methods. How far educational methods and technique will prevail in this country and become general, depends on the efforts of those who worked with her, knew her, and loved her.

RICHARD FIRESTONE

Rollins College, Florida
February, 1944

ANNOUNCEMENTS

Sociometry, A Journal of Inter-Personal Relations

Dr. George A. Lundberg, Editor of SOCIOMETRY, is on leave of absence. The responsibility of editing the journal rests, for the February and May issues, with Dr. J. L. Moreno, chairman of the editorial board, until Dr. Lundberg is able to resume his duties.

Sociometry, May 1944

The next issue will contain the following papers: Ronald Lippitt, "Role Practice in Education," Edwin Lemert and Charles van Riper, "The Psychodramatic Approach to the Treatment of Speech Defects," Theodore R. Sarbin, "The Use of Psychodramatic Techniques in Aptitude Testing," Nahum E. Shoobs, "Psychodrama in the Classroom," Bruno Solby, "Psychodramatic Principles Used in Group Psychotherapy," Charles E. Hendry, "Reality Practice Brings the Community into the Classroom," J. L. Moreno and Florence B. Moreno, "Spontaneity Theory of Child Development," Zerka Toeman, "Psychodramatic Approach to Military Situations."

Sociometry Monographs and Psychodrama Monographs

For practical reasons, sociometric and psychodramatic researches are being published in two independent series and will have a different external appearance. New psychodrama monographs are: (1) Sociodrama, A Method for the Analysis of Social Conflicts, by J. L. Moreno, (2) Psychodramatic Treatment of Performance Neurosis, by J. L. Moreno, (3) The Theatre for Spontaneity, by J. L. Moreno.

New Books Received

Hadley Cantril: "Gauging Public Opinion," Princeton University Press, 1944. Henry Pratt Fairchild, Editor: "Dictionary of Sociology," Philosophical Library, 1944. Louis R. Fike: "No Nation Alone," Philosophical Library, 1943. Lella Secor Florence: "American and Britain, Only An Ocean Between," George G. Harrap & Company Ltd., 1943. Alfred McClung Lee: "Race Riot," The Dryden Press, 1943. Underhill Moore and Charles C. Callahan: "Law and Learning Theory, A Study in Legal Control," The Yale Law Journal Company, Inc., 1943.

BULLETIN OF THE SOCIETY FOR PSYCHODRAMA AND GROUP PSYCHOTHERAPY—NO. 3.

American Psychiatric Association, Annual Meeting, 1944

The annual meeting will be held at Philadelphia, at the Bellevue Stratford Hotel, from May 15th to 18th, 1944. A round table conference on group psychotherapy, including a discussion on psychodrama, will take place on May 16th. Moderator is Dr. Roscoe W. Hall, St. Elizabeths Hospital, Washington, D. C.

Psychodramatic Institute, New York City

The following sessions, directed by J. L. Moreno, M.D., aroused particular interest because of the methods used:

Session on January 28th, 1943, Psychodramatic Approach to the Dance, with demonstrations of therapeutic dancing. The dance therapist was differentiated into two categories: the dancer-actor who dances to cure himself—auto-catharsis—and the dancer-actor who dances in behalf of a group of spectators, who co-experience with him in the dance performance—community catharsis.

Session on February 18th, 1944, Psychodrama of Dreams. The dramatization of a dream places the subject in the position of the sleeper, so that he can warm up to the state of dreaming on the stage. Our dreamer-actor portrayed his dream on the stage, warming up to the act of dreaming instead of telling the dream. The total psychodramatic situation of the dreamer was portrayed in such a fashion that every bodily action of the subject, the relationship to objects, persons, and to the total dream environment, became visual. The dream-characters were like wax figures on the stage, they moved, acted, or sprung to life as the dreamer directed them.

Session on February 25th, 1944, Treatment of a Religious Psychosis on the Psychodrama Stage. The subject worked on the level of the creative ego, he went to hell and up to heaven. At the end of his psychodrama nothing was left but the idea of his mother. His actual mother who was in the audience, acted with her son on the stage. An interesting method of presentation is the intermediate acting technique, half-way acting, half-way speaking. In this technique the subject illustrated his own actions by comments, given to the director and to the group of spectators. He changed the tempus of action from the present into the past. The subject interrupted action by a lengthy analysis of his acts. Psychodramatic procedure as here described is not always acting in the theatrical sense, but a mixture of acting, story-telling, self-analysis, and returning to acting. The director did not force the subject to submit his own spontaneous level of presentation to a directorial plan.

PSYCHODRAMATIC RESEARCH PROJECTS

The recent influx of a number of students eager for research opportunities in psychodrama and related techniques has enabled the Committee for Research to adopt a more ambitious and extensive program of research. There is reason to believe that the projected experiments and those in progress now will prove fruitful, both in educating the students and in adding significantly to the literature in this rapidly expanding scientific field. The Committee would be pleased to receive communications from interested workers in psychodrama and related fields, in other cities. A profitable exchange of ideas would be one of the results, thus achieving an integration.

Due to the limitations of space, we can, at this time, give only a brief survey of our present endeavors and future undertakings.

Among the experiments now undergoing investigation is one devised by Henry Loeblowitz, and is concerned with the phenomenon of autism which has recently occupied the attention of many workers in the field of psychology. Simultaneously (under the directorship of Paul Cornyetz), the Committee is making a tentative research into the psychodramatic aspects of the dream.

The thesis of the first research project is the relation of autism to Moreno's auto tele, the determination of the extent and influence of autism in the structuring of psychodramatic situations, and the conception and execution of the (psychodramatic) rôle. A number of situations, systematically arranged to form a scale of autism, is being used as the experimental means of getting at the core of the problem. It is expected that upon the conclusion of this experiment, a clearer understanding of the rôle of autism and auto tele and how they functionally operate in the psychodramatic situation will be gained.

The experimentation with the dream is an investigation of relevant techniques in the interpretation. The structure of the manifest dream, the interrelationships of episodes, and the connection of this material with the latent dream are the subject matter. The clarification of dream images is to be achieved through their psychodramatic realization.

Among those projects which will receive consideration upon the completion of the aforementioned experiments are: (1) a correlative study of thematic apperception test and the psychodrama, (2) a research into the psychodramatic techniques intuitively used by the great playwrights, and (3) an examination of the field concept in comparison with the concept of the psychodramatic situation.

The thematic apperception test is one of the most recent developments in the projective technique of personality investigation. Much interesting

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The thematic apperception test is one of the most recent developments in the projective technique of personality investigation. Much interesting

work has been done with this technique. It is the aim of Paul Cornyetz and Henry Loeblowitz to compare and contrast the T. A. T. and the psychodramatic technique as to their merits and overlapping of purpose. It is proposed that the T. A. T. be administered to a sufficient number of subjects. The results will be interpreted and the areas of conflict (as revealed by the T. A. T.) will be examined by their projection onto the stage in appropriate situations. In the second half of the experiments, the procedure will be reversed. It will be interesting to see what this study yields.

The intuitive understanding and utilization of the principle of the drama as catharsis lends itself to extensive, analytical investigation. Further, a brief presentation of a play which will emphasize and crystallize one of the mechanisms will be undertaken.

This program is the most extensive thus far attempted by the Committee for Research. Each experiment touches upon vital problems in dynamic psychology and it is confidently believed that successful completion of them may have far-reaching implications.

Committee for Research
Paul Cornyetz: Chairman
Henry Loeblowitz: Associate

Shirley Kosloff	Joan Alles	Shirley Greenstein
Herbert Wolf	Marion Jacobs	Lillian Dunning
Shirley Glasser	Rhoda Greenstein	Shirley Smith
Joseph Di Giovanni	Nathan Schneider	Burt Alpert

MAN IS THE MEASURE . . .

READ BAIN
Oxford, Ohio

College Teaching. The eighth of the now known nine readers of MITM urged me to comment on Mr. Katona's "The Teaching of Sociology in a Democracy" (*Amer. Sociol. Rev.*, Aug. 1943, 439-449). The Interested Reader did not indicate whether he was pro or con Katona, or merely curious.

Needless to say the article has its good points, but I shall ignore these and discuss its general implications. These strike me as dubious and even dangerous for college teaching. The author seems to be a very serious young man, though perhaps he should have been an artist or high school teacher or journalist or something other than a college teacher and scientist.

He regards college teaching as a case of "cultural lag". By "lag", he apparently means behavior which he disapproves. He is not the first sociologist to use "lag" normatively nor is he likely to be the last. "Cultural lag" is now a widespread polysyllabic epithet used by reformers, "radicals", and suchlike nonscientific gentry. Katona thinks this "lag" is shown by poor teaching and overemphasis on research. He says poor or mediocre research is much better rewarded than good teaching.

This raises four questions: 1. What are colleges trying to do? 2. What is good college teaching? 3. What is good research? 4. What is the relation between education and democracy? I could answer these questions better if I had more space and more wisdom, but I must do the best I can even at the risk of sounding dogmatic; twenty-five years from now I could do better—I hope.

1. Colleges should train people only for highly technical and professional occupations. The college of arts and sciences should give preprofessional preparation for professional training. It should devote no time to such things as vocational guidance, helping students "find themselves", general "culchah", citizenship training, or purely routine trades and occupations. An entering freshman should have sufficient mastery of our basic symbol systems and possess enough general information to make real college work possible; he also should know in a general way (the sooner and more exactly, the better) what profession he will follow; finally, and perhaps most important, he should have some creative intelligence. Without this latter trait, a "professional" man is mere artisan, not artist; mere routineer, not pioneer; mere mental mechanic, not creator; he may be an actual social menace.

I wrote an essay some years ago entitled "How High Is Higher Educa-

tion?" I held that the fifty-seven varieties of intelligence can be classified roughly as *Operative* and *Creative* and that the lower schools should be concerned mainly with the first, higher education with the second. Of course, both types of intelligence are functionally related; hence, the lower schools should find and foster creative intelligence even while they are primarily devoted to the training of operative intelligence. They largely fail in this because most teachers do not have very much creative intelligence and because they are too busy trying to teach tool mastery and information to too many students by methods which depend almost entirely upon the use of operative intelligence by both teacher and pupil. I concluded that our present "higher" education is pretty low. The essay must have been pretty low, too, since no one would print it.

High school should complete formal education for about 75% of the population. It should teach 100% all they need to know about citizenship, artistic and recreational appreciation and participation, how to live the "good life" and make a good living, how to use our basic symbol systems, and how to keep on "getting educated" for the remainder of their lives. Perhaps 15% should receive further training in technical schools and 10% should be eligible for higher education, seven or eight percent of whom eventually would qualify for professional careers.

The college and university must teach some special tool techniques, both symbolic and mechanical, but only as these are necessary for professional performance. Their major task should be the development of critical, creative, judgment-making intelligence devoted to the common welfare. It is legitimate for a nonprofessional person to think of his income as a "means to other ends" although his life will not be wholly satisfying unless he also enjoys his work and gets social status from it. It is illegitimate for a professional man to be interested primarily in the "means-end", pecuniary, or honorific aspects of his calling. His basic interest must be the problems of his specialty and their impact upon all other aspects of life, especially as these are dealt with by the other professions.

2. When we know what higher education is trying to do, we know implicitly what good college teaching is. The good college teacher must be competent in his own field, have a wide general knowledge of all other professional fields and show the interrelationships that exist; must recognize and stimulate creative minds; must be a question-raiser and rubbish-burner; must make students critical and curious; must emphasize methods and theories more than mere information and conclusions; and he must do all this at the abstract symbolic level. All learning is by *doing*, to be sure, but operating with symbols, generalizations, hypotheses, comparative analysis,

and creative synthesis is a kind of *doing* far more important at the college level than smelling slums or flowers or looking at pictures or having heebie-jeebies over "big words".

Maps, movies, pictures, graphs, and drawings have an important place in such teaching, but I insist that their proper use at the *college level* is very different from what Katona seems to imply. Some years ago I said some things about the teaching of sociology similar to what Katona has said, but I was talking about *high school* ("High School Sociology", *The High School Teacher,* April 1931). At this level, teaching should be sensory, student-centered, and as participative as possible; at the college level, it should be as conceptual, idea-and-method-centered as possible. It still should be participative, but the participation should consist of the whetting of mind on mind; it should be highly abstract, intellectual, slam-bang, free-for-all. It should be taken for granted that the students have considerable information and know how to get more; that they can think; that they know what they are in college for—and can read, write, and cipher.

A good college teacher should not have to rely on "funny stories", or engage in "jolly fun", or celebrate the "joys of jazz", or perform monkey-shines to brighten up "Blue Mondays". Granting that Katona has overstated his position a little, it still seems to me only a whoop and a holler from tumbling, yodeling, and prestidigitation—the Hollywood concept of college. It is no compliment to say "he makes me feel at ease"; "ease" suggests sleep, or apathy, or amusement. It is a compliment to say "he makes me feel damnably uncomfortable because he makes me think"; "he makes me realize how little we know and how terribly we need to know more"; "he makes me eager to go on"; "he sets problems, he makes challenges"; "he makes me realize what a glory and responsibility it is to be a *thinking* animal". One of the finest things I ever heard about a college teacher was said by a student of A. J. Carlson: "Every lecture suggests a dozen doctoral dissertations".

The good college teacher sets the minds of the students on fire—with ideas, with aspirations, with visions of the Yet Unknown, with the thrill of Things Learnable, with the need of every man to unify his universe, with the challenge to find his way in this dangerous and lovely wilderness world. To be such a teacher, a man must himself be actively engaged in this endless quest, must be to some extent an example of the virtues he would inculcate. The first requisite for teaching a dog a trick is to know more than the dog. A teacher of science must know what good research is, and do some; a teacher of the arts must have some ability to create art. A "good" college teacher is one whose students soon surpass him.

A teacher who is arranging the flowers, monkeying with the bulletin board, or amusing Blue Monday's stupid children, is likely to lack the fiery contagion of the creative mind. Pleasant, healthful, properly equipped rooms are highly desirable, but too much attention to décor and academic busy-work may destroy creative teaching. More than mere mechanics is needed—we must have mighty men of mental valor.

Some sad and sour-puss cynic may say, "Very pretty—but college students are not the paragons you postulate—to say nothing of teachers. We are faced with a *fact,* not a bright utopian dream of what-ought-to-be". True, but we do not solve our problem by aggravating the evil any more than we do by ignoring it; to follow either course is to kiss higher education goodbye. Sanity counsels that we preserve the remnants of higher education that still exist and proceed to eliminate the deadwood and debris which presently afflict us. We must prevent matriculation by credentials; we must require stiff entrance tests to ascertain whether the student can read, write, and cipher with ease and accuracy; whether he has adequate factual information; and above all, whether he has any creative intelligence. We also must get teachers who have marked creative intelligence and eliminate those who lack it. There is no such thing as a "good college teacher" who is not also a creative man; those who claim to be "good" teachers but are "not interested in research, creative work, or productive scholarship" usually are faking stinkers who befoul and make barren the good earth of Academia.

Many a mediocre man cherishes the illusion that he is a "good teacher". By what criteria—and whose? Once I tried to get this tenuous term defined and tested. Many who prided themselves most on being "good teachers"—since they were nothing else—objected most strenuously to anonymous student ratings by out-going seniors using specified criteria; they objected to phonographic or stenographic records of classroom procedures (photophonographic records taken without the knowledge of teachers and students would be best, and are possible); they objected to ratings by colleagues, visitation by deans, heads, and colleagues from their own and other departments. Standards of good teaching could be formulated and measured, not perfectly, but far more objectively than the current methods of gossip, hearsay, "intuition", back-scratching, self-valuation, and self-adulation.

3. Mr. Katona makes some loose remarks about the poor quality of research and how it is overrated. It is true that many mediocre men are doing a lot of so-called "research", "creative work", and "productive scholarship". It is easy to make nasty remarks about "pointless and atomistic" research—especially easy for those who have done none. It is also easy to condemn administration officers for rewarding quantity rather than quality;

actually, most administrative officers are not so dumb: they judge the quality of the work to some extent by the quality of the journal in which it appears, the auspices under which it is done, by whom it is published; they are not taken in by the thin man who stretches himself still thinner by publishing rewrites of the same work in a dozen doubtful places; they are not unmindful of the judgment of the man's colleagues, on and off the campus; some even read the man's work and are capable of evaluating it soundly. I defer to no man in criticism of college administrators, though it must be said that most of them do a better job than most of their severest critics would be capable of doing. Those who are most immediately concerned with recommendations for advancement in rank and pay are usually more capable of evaluating the quality of the research than the alleged "good teacher" who has never done any research.

It is also true that many men are not rewarded for their much publication; others are rewarded for small output of high quality. I know of one man in a great university who is a full professor and an excellent teacher. He has published only a few articles in thirty years and no systematic treatise, but no one can write competently in his field without citing his work. Some "atomic seed" of apparently "pointless" research may lie dormant for years and then bring forth abundant fruit. The history of all sciences and arts is full of such instances—but alleged "good" teachers are often ignorant of the history, philosophy, and methodology of their fields. Most research is fruitless trash—but so is most teaching and learning; perhaps most lives are trash if we measure them by the lives of creative power and wisdom which have raised mankind from his brute estate. Properly conceived, no man's life is trash, and no man's honest and best efforts ever should be scorned; operative intelligence is not "inferior" to "creative intelligence", and each should be cherished, developed, and properly rewarded; however, it is wasteful and tragic to require either type of man to do the other man's work. In both cases, the work will not be well done.

4. The above sentence introduces the question of democracy in education which is merely a phase of democracy in general. Hierarchy is not tyranny and status and prestige are not necessarily undemocratic. The creative man is likely to be a good "democrat" if that much-muddled word means simplicity, modesty, kindness, and regard for others. Creative men are not snobs and tyrants unless their creativity is neurotic or psychotic compensation; even in such cases, they are less likely to be "undemocratic" than are uncreative men. Psychopathic creativity seldom lives long in a culture; if it does, it usually is associated with sociopathic behavior.

To water down our teaching to the level of the biggest nincompoop in

the class is not democracy; it is idiocy. To get what is called "democracy" at the expense of *higher* education will degrade or destroy democracy. It is an insult to the Democratic Ideal to assume that we must cater and kowtow to the lowest levels of intelligence, whether operative or creative. "Low" has no normative connotation here. It refers only to the technique of education and implies that true democracy in education, and in all life situations, requires that appropriate means must be used to achieve desired ends. Education is like shooting birds on the wing—you must lead 'em to hit 'em, but you can't hit 'em if you lead 'em all by the same distance—it depends on the range, wind, air density, how fast they are flying, and what kind of a gun you have. "To each according to his need; from each according to his ability" is democracy if the methods used are evocative rather than coercive, coöperative rather than authoritarian or paternalistic.

Status, prestige, and class are not *per se* undemocratic; they become so when special privileges are granted and rights denied irrationally and nonfunctionally. All that democracy requires is a free and equal chance for all men to prove themselves unequal in socially useful activity and to get the rewards of status and prestige which such behavior deserves. Democracy merely requires that no man shall get special advantages because he can do something better than another man or something the other man cannot do at all; that all men shall be treated on their merits; that their opportunities and rewards shall not depend on adventitious factors; that no man shall be a parasite and no man an exploiter; that differences shall not be the basis for positive or negative moral judgments except in cases where the welfare of the larger society is clearly forwarded or retarded.

We shall not get democracy in education, or in anything else, until teachers and students and all men act in accordance with these principles. Perhaps we shall not approach it in education until degrees and ranks lose their snob value and college professors have no higher social status than garbage collectors. Of course, I hold that *good* garbage collectors should have higher social status and more pay than *bad* college professors, and vice versa. A man's social status should depend upon how well he does what is well worth doing and no man should possess more wealth than is neecssary for a decent healthful life—and no man should have less.

We should not worry too much about "teaching sociology (or anything else) in a democracy"; we should worry much more about creating a democracy fit for all men to live in. Then teaching would pretty much take care of itself and it would still remain an easy, thrilling, satisfying vocation—for those who are competent to do it.